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## 2013-2014 Bulletin

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## Undergraduate

The character of the University of Dayton is defined by our search for knowledge. Knowledge that changes the way we perceive the world. Knowledge that solves problems and helps make our lives better. Knowledge that creates a more humane and compassionate future for all of us.

Whether you're investing $\$ 14$ million of the University's endowment or assisting with research that makes space exploration safer, the University of Dayton's academic programs encourage you to engage the world, developing a critical mind and a compassionate heart.

In the undergraduate academic information section, you can continue your search for knowledge - and locate specifics on various academic areas and the programs and courses they offer.

## UG General Information

Of course, there's more to your academic experiences than just the classes you take. In fact, the University is known for its innovative approach to blurring the lines between learning and living to create a vibrant, engaging community dedicated to moving the world forward.

Whether you're looking to learn more about admission, student services, student costs and finances, or other facets of life that support your academic career, you'll find the answers here.

In this section:

- About the University of Dayton (p. 5)
- Academic Information (p. 37)
- Admission (p. 28)
- Directories (p. 64)
- Financial Information (p. 32)
- Interdisciplinary, Experimental and Special Areas (p. 51)
- Libraries and Research Services (p. 50)
- Student Life and Services (p. 17)


## The University of Dayton

In the summer of 1849, Father Leo Meyer and Brother Charles Schultz, the first Marianist missionaries to America, journeyed from Alsace in France to Cincinnati, Ohio, where they intended to establish a base for the order in this country. They arrived, however, during a cholera epidemic, so Bishop John Purcell of Cincinnati soon sent Father Meyer to Dayton to minister to the sick of Emmanuel Parish. Here he met John Stuart, whose little daughter died of cholera the year before. Mr. Stuart wanted to sell his Dayton property and return with his wife to Europe. On March 19, 1850, the feast of St. Joseph, Father Meyer purchased Dewberry Farm from him and renamed it Nazareth. Mr. Stuart accepted a medal of St. Joseph and a promise of $\$ 12,000$ at $6 \%$ interest in return for 125 acres, including vineyards, orchards, a mansion, and various farm buildings. Meanwhile, more Marianists arrived, and Nazareth became the first permanent foundation of the Society of Mary in the Western Hemisphere.

The University of Dayton had its earliest beginnings on July 1, 1850, when St. Mary's School for Boys, a frame building that not long before had housed farm hands, opened its door to fourteen primary students from Dayton. In September, the classes moved to the mansion, and the first boarding students arrived. Father Meyer served as administrator, Brother Maximin Zehler taught, Brother Schultz cooked, and Brother Andrew Edel worked as farmer-gardener.

Five years later the school burned to the ground, but within a year classes resumed. By 1860, when Brother Zehler became president, enrollment approached one hundred. The Civil War had little direct effect on the school because most of the students were too young to serve. St. Mary's grew as college preparatory courses were started in 1861. Then came a novitiate and a normal school for Marianist candidates. An old history refers to the period of 1860-75 as "the brick-and-mortar years." The Chapel of the Immaculate Conception was completed in 1869. In 1870, visitors marveled at new St. Mary Hall, the largest building in Dayton, and called it "Zehler's Folly." The new "college department" moved into it in 1871. (St. Mary Hall is now listed in the National Register of Historic Places.)

In 1882, the institution was incorporated and empowered to confer collegiate degrees under the laws of the State of Ohio. In 1883, another devastating fire visited the campus, but this time some of the buildings were saved. The statue now known as Our Lady of the Pines was erected in gratitude, and the following year St. Joseph Hall was built, symbolizing the renewed confidence of the Dayton Marianists. In a more famous emergency, the school was spared by water as it had not been by fire. Because of its hillside location, it survived the Great Flood of 1913 untouched and was able to give shelter to 600 refugees.

St. Mary's had reorganized in 1902 into four departments-classical, scientific, academic, and preparatory. In 1905 it added the Commercial Department, which would become the Department of Commerce and Finance in 1921, the Division of Business Organization in 1924, and ultimately the School of Business Administration. Four engineering departments, appearing from 1909 to 1920, were to become the Engineering Division. In 1915, the Marianist training program (novitiate and normal school) was moved to Mount St. John's.

Known at various times as St. Mary's School, St. Mary's Institute, and St. Mary's College, the school assumed its present identity in 1920, when it was incorporated as the University of Dayton. The same year, the elementary division was closed, the Division of Education was organized, and the University started its tradition of evening and Saturday classes to serve adults in the surrounding community. In 1922, the College of Law opened, also with evening classes. Other graduate programs followed, to augment the professional degree programs which distinguished the University from many of Ohio's other independent institutions of higher learning. In 1923, the first summer session was held; its classes, like those of the law college, were open to women as well as men.

The 1930s, with the Great Depression, were in many ways a time of retrenchment for the University of Dayton as for most other American schools. The Dayton Marianists had survived cholera, smallpox, and influenza, wars, fire and flood, and (in 1924) a Ku-Klux-Klan crossburning on the campus. In 1935, even as the University turned its preparatory school functions over to Chaminade High School and graduated what was to be its last class in law for almost forty years, it inaugurated a college for women, with sisters of Notre Dame in charge of twenty-seven entering female students. Two years later, the college for women closed; all divisions opened to women, and the University became fully coeducational.

Enrollment had passed a thousand when World War II broke out. By 1950, with the return of the veterans, it reached more than 3,500 . In 1967, it topped 10,000. But then, with the expansion of a community college and the establishment of a state university nearby, enrollment declined, and the resulting retrenchment was exacerbated by rising inflation and the energy crisis. Nor did the social turbulence and activism of the late 1960s and early 1970s bypass the University of Dayton. Some students and faculty protested against the Vietnam War, compulsory ROTC, and defense-related research activities. They campaigned also for changes in the curriculum, seeking more opportunities for meeting personal needs and goals. In response, the University gave greater responsibility to students for their own academic decisions, and it initiated interdisciplinary programs, self-directed learning, and various experimental courses and methods. Meanwhile, the profile of the student body changed. The 1960s saw significant increases in female and minority students. In the 1970s, there was a shift to a largely residential student body, and at the same time many more "nontraditional" (older) students matriculated. By the mid-1970s, total enrollment steadied at more than 10,000, with about 6,000 full-time undergraduates.

The University held its first general public fund-raising campaign in order to erect Wohlleben Hall in 1958 and Sherman Hall in 1960. Both campus and off-campus residences, residence halls, apartments, and houses were added and improved as such emergency accommodations as surplus Army barracks and an adapted Army hospital (renamed the West Campus) were phased out.

Long-range planning has helped integrate new buildings and old and made the campus more livable by increasing its beauty as well as its efficiency. In 1986, old and new combined in the design of the Anderson Center between Rike Hall and Miriam Hall. When fire ravaged St. Joseph Hall in 1987, the University was able to rebuild and restore it without harming the architectural integrity of that historic corner of campus. Keeping pace with the needs of the University, the Jesse Philips Humanities Center opened in 1993, and Joseph E. Keller Hall was built for the School of Law in 1997. In addition, the University has renovated Miriam Hall, converted its child care center into an early childhood demonstration school called the Bombeck Family Learning Center and completed the first phases of a modern Science Center. In 2002, the University of Dayton Arena underwent a modernization, placing it among the best venues for basketball in the country. The Donoher Basketball Center, a major addition to the UD Arena giving UD a premier basketball facility for both playing and training, was dedicated in 1998.

As the University of Dayton entered the 21st century, it built modern student facilities, including ArtStreet and Marianist Hall (2004) and RecPlex (2006).

The edifices are not the only changes on campus. In 1960, the University reorganized academically and administratively. Administrative changes saw the formation of the College of Arts and Sciences from what had been two separate units. Other divisions became the Schools of Business Administration, Education and Engineering. In 1970, the University charter was amended and lay members now joined the Marianists on the Board of Trustees. In 1974, the School of Law reopened.

Academically, the University has continued to expand and enrich its offerings and support services, especially since mid-century. Graduate studies, abandoned during World War II, resumed in 1960, with the School of Education leading the way. In 1969, the Department of Biology inaugurated the first doctoral program since 1928. The School of Engineering introduced two doctoral programs in 1973, and in 1992, the first doctoral degrees in educational leadership were awarded. In 1997, the Board of Trustees approved a doctoral program in theology with a focus on the Catholic experience in the United States. It was the first such doctoral program on a Catholic campus nationally.

In 1975, the Marian Library, which had grown to international renown since its inception in 1943, founded the International Marian Research Institute (IMRI), which was incorporated in 1984 as a branch of the Marianum in Rome. IMRI is empowered to confer licentiate and doctoral degrees in theology, with a specialization in Mariology. The Marian Library now holds the world's largest collection of print materials on Mary, the mother of Jesus.

For all undergraduates, a general education plan was adopted in 1983 to foster integration of the liberal arts in a professional education. In 1990, the Academic Senate approved a revision of the general education requirements that called for an integrated base of four humanities courses complemented by clusters of other courses, requiring various disciplines to focus on a single theme. The Academic Senate revised and renamed the general education requirements again in 2010 to emphasize seven mission-related student learning outcomes: scholarship, faith
traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation. The Common Academic Program (CAP), taken by all undergraduates, integrates all aspects of students' University experiences beginning with courses in the Humanities Commons and culminating in a Capstone experience. The University has always maintained a tradition of innovation. In 1874, St. Mary's Institute's new Play House gymnasium was the only one of its kind in Ohio, and it is probable that the first organized basketball game in the state took place there. A system of elective studies was inaugurated in 1901. In 1924, the University was the first school to be granted a charter by the National Aeronautical Association. It was one of the first in the nation to offer a course in biophysics (1935). In 1948, it was a pioneer in student ratings of professors, and in 1952, it invited persons over 60 to attend its evening classes as guests. Its graduate program in laser optics was one of the earliest in the country. It was one of the first educational institutions to adopt electronic data-processing equipment and to offer degrees in computer science. In 1999, the University of Dayton was the first in the nation to offer an undergraduate degree program in human rights. The University is currently developing partnerships with top universities in China, including Nanjing University, one of that nation's leading research institutions.

More than just a breeding ground for academic excellence, the University also responds to the needs of society and the region.

Sponsored research at the University began in 1949 with a few faculty members and student assistants doing part-time research for industry and government agencies. In 1956, the University of Dayton Research Institute (UDRI) was formed to consolidate the administration of the growing research activities. Annual research volume has increased from $\$ 3,821$ in 1949 , to more than $\$ 85$ million today. The University of Dayton ranks second in the nation in funding for materials research.

Named for Brother Raymond L. Fitz, S.M., the University's longestserving president, the Fitz Center for Leadership in Community, founded in 2002, connects students and faculty to the community through service learning, social justice and ongoing involvement.

Among the University's other community collaborations is the Dayton Early College Academy, a public high school founded in partnership with the Dayton Public Schools. DECA, whose first class graduated in 2007, is the only charter school in the country operated by a Catholic university.

The University long-range plans include incorporating nearly 50 acres purchased from NCR in 2005. The land, lying between the academic core of campus and the Arena Sports Complex, increased the size of campus by nearly a quarter.

From its humble roots as a private boarding school for boys, the University of Dayton today ranks among the best Catholic universities in the country. It is the largest independent university in Ohio and draws students from around the country and the world.

In this section:

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## Academic Calendar Year

The University of Dayton operates under an early semester, split thirdterm calendar. The academic year begins with the fifteen-week fall term, which ends before Christmas. The spring term, also fifteen weeks, begins in January and ends early in May. The third, or summer term, is split into two complete sessions of six weeks each.

The advantages of such a calendar are many. Students may enroll for the traditional fall and spring semesters and have a four-month summer vacation; or they may add half terms or full terms to enrich their programs or speed the completion of their degree requirements. The University issues diplomas at the end of each term and holds ceremonies in May and December. Students who must earn their own money can have extra time for employment in spring and summer; or they may enroll for the third term and work during the fall or the spring term, when the employment market is not crowded with other college students.

## Accreditation

The University of Dayton is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools http://www.ncahlc.org/ HLC phone: (312) 263-0456.

The University of Dayton is also officially accredited by the following agencies:

- Accreditation Council for Education, Nutrition \& Dietetics (ACEND) for the didactic program in dietetics
- American Bar Association (ABA) for the School of Law
- Association to Advance Collegiate Schools of Business (AACSB International) for the baccalaureate, accounting and Master of Business Administration programs of the School of Business Administration
- Commission on Accreditation in Physical Therapy Education (CAPTE)
- Council for Accreditation of Counseling and Related Educational Programs (CACREP)
- Engineering Accreditation Commission of ABET, http://www.abet.org for programs in chemical engineering, civil engineering, computer engineering, electrical engineering, and mechanical engineering
- Engineering Technology Accreditation Commission of ABET, http:// www.abet.org for programs in electronic and computer engineering technology, industrial engineering technology, manufacturing engineering technology, and mechanical engineering technology
- Masters in Psychology Accreditation Council (MPAC) for the Master of Arts program in Clinical Psychology
- National Association of Schools of Art and Design (NASAD)
- National Association of Schools of Music (NASM)
- National Association of Schools of Public Affairs and Administration (NASPAA)
- National Council for Accreditation of Teacher Education (NCATE)

The University has the approval of the following:

- American Chemical Society
- American Music Therapy Association
- Association of American Law Schools
- Counselor, Social Worker \& Marriage and Family Therapist Board
- Ohio Board of Regents
- State of Ohio Department of Education


## Basic Academic Structure of the University

The University of Dayton now includes the College of Arts and Sciences and four professional schools, each with a dean: the School of Business Administration, the School of Education and Health Sciences, the School of Engineering (including Engineering Technology), and the School of Law. The deans, through their departmental chairpersons, administer the undergraduate and graduate programs. The vice president for graduate studies and research and dean of graduate studies has the overall responsibility for all graduate programs. At the head of the academic structure of the University is the provost.

The University of Dayton awards the following baccalaureate, professional, and graduate degrees:

- Bachelor of Arts
- Bachelor of Chemical Engineering
- Bachelor of Civil Engineering
- Bachelor of Electrical Engineering
- Bachelor of Fine Arts
- Bachelor of General Studies
- Bachelor of Mechanical Engineering
- Bachelor of Music
- Bachelor of Science
- Bachelor of Science in Business Administration
- Bachelor of Science in Computer Engineering
- Bachelor of Science in Education and Health Sciences
- Bachelor of Science in Engineering Technology
- Master of Arts
- Master of Business Administration
- Master of Computer Science
- Master of Financial Mathematics
- Master of Laws
- Master of Mathematics Education
- Master of Public Administration
- Master of Science
- Master of Science in Aerospace Engineering
- Master of Science in Applied Mathematics
- Master of Science in Chemical Engineering
- Master of Science in Civil Engineering
- Master of Science in Education and Health Science
- Master of Science in Electrical Engineering
- Master of Science in Electro-Optics
- Master of Science in Engineering
- Master of Science in Engineering Management
- Master of Science in Engineering Mechanics
- Master of Science in Management Science
- Master of Science in Materials Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Renewable and Clean Energy
- Master in the Study of Law
- Educational Specialist
- Juris Doctor
- Doctor of Engineering
- Doctor of Philosophy in Biology
- Doctor of Philosophy in Educational Leadership
- Doctor of Philosophy in Electro-Optics
- Doctor of Philosophy in Engineering
- Doctor of Philosophy in Theology
- Doctor of Physical Therapy


## College of Arts and Sciences

The College of Arts and Sciences offers five undergraduate degrees:

- Bachelor of Arts
- Bachelor of Science
- Bachelor of Music
- Bachelor of Fine Arts
- Bachelor of General Studies.

Academic majors offered by the College:

- American Studies
- Applied Mathematical Economics
- Art Education
- Art History
- Biochemistry
- Biology
- Chemistry
- Communication Management
- Communication Studies
- Computer Information Systems
- Computer Science
- Criminal Justice Studies
- Economics
- Electronic Media
- English
- Environmental Biology
- Environmental Geology
- Fine Arts
- French
- General Studies
- Geology
- German
- Graphic Design
- History
- Human Rights
- International Studies
- Journalism
- Languages
- Mathematics
- Medicinal-Pharmaceutical Chemistry
- Music
- Music Composition
- Music Education
- Music Performance
- Music Therapy
- Philosophy
- Photography
- Physical Science
- Physics
- Physics-Computer Science
- Political Science
- Pre-Dentistry
- Pre-Medicine
- Psychology
- Public Relations
- Religious Studies
- Sociology
- Spanish
- Theatre
- Visual Arts
- Women's and Gender Studies

The College of Arts and Sciences offers Masters degree programs in:

- Biology
- Chemistry
- Communication
- Computer Science
- English
- Applied Mathematics
- Pastoral Ministry
- Psychology
- Public Administration
- Theological Studies

The College works in collaboration with the School of Education and Health Sciences to offer the Master of Arts in English with a teaching track, the Master of Science in Education and Health Sciences with music education concentration, and the Master of Science in Education and Health Sciences with art education concentration.

The College of Arts and Sciences offers graduate programs leading to doctoral degrees in biology and in theology and participates through the Department of Physics with the School of Engineering in an interdisciplinary program leading to the doctoral degree in electro-optics.

## School of Business Administration

The School of Business Administration offers a Bachelor of Science degree with majors in:

- Accounting
- Business Economics
- Entrepreneurship
- Finance
- International Business
- Leadership
- Management Information Systems
- Marketing
- Operations and Supply Management

On the graduate level, the School awards the Master of Business Administration degree.

## School of Education and Health Sciences

The School of Education and Health Sciences (SEHS) prepares professionals for the early, middle, and secondary levels, and for specialized fields in:

- Art
- Music
- Foreign Language
- Intervention Specialist
- Physical Education
- Dietetics/Nutrition
- Exercise Physiology
- Exercise Science
- Pre-Physical Therapy
- Sport Management

It conducts professional development and post-graduate programs and offers graduate programs leading to the degrees of:

- Master of Science in Education and Health Sciences
- Educational Specialist
- Doctor of Philosophy in Educational Leadership
- Doctor of Physical Therapy

These programs are designed to prepare school administrators, school counselors, school psychologists, and teachers for both public and private schools nationwide, as well as preparing physical therapists for practice in a clinical setting.

## School of Engineering

The School of Engineering includes the departments of:

- Chemical and Materials Engineering
- Civil and Environmental Engineering and Engineering Mechanics
- Electrical and Computer Engineering
- Mechanical and Aerospace Engineering
- Engineering Technology

The School offers four-year curricula leading to the degrees of:

- Bachelor of Chemical Engineering
- Bachelor of Civil Engineering
- Bachelor of Electrical Engineering
- Bachelor of Mechanical Engineering
- Bachelor of Science in Computer Engineering
- Bachelor of Science in Engineering Technology with specialties in:
- Electronic and Computer Engineering Technology
- Industrial Engineering Technology
- Manufacturing Engineering Technology
- Mechanical Engineering Technology

The School offers graduate programs leading to the degrees of:

- Master of Science in Engineering
- Master of Science in Aerospace Engineering
- Master of Science in Chemical Engineering
- Master of Science in Civil Engineering
- Master of Science in Electrical Engineering
- Master of Science in Electro-Optics
- Master of Science in Engineering Management
- Master of Science in Engineering Mechanics
- Master of Science in Management Science
- Master of Science in Materials Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Renewable and Clean Energy
- Doctor of Engineering
- Doctor of Philosophy in Engineering
- Doctor of Philosophy in Electro-Optics


## School of Law

The University of Dayton School of Law offers the Juris Doctor and two joint degree programs: Juris-Doctor-Master of Business Administration and Juris Doctor-Master of Science in Education and Health Sciences (Educational Administration).

## The Graduate School

Programs leading to advanced degrees are offered through the Schools of Business, Education, Engineering and Law, and through the College of Arts and Sciences.

Doctoral programs are offered in:

- Biology
- Theology
- Aerospace Engineering
- Electrical Engineering
- Materials Engineering
- Mechanical Engineering
- Electro-Optics
- Educational Leadership

Both Ph.D. and D.E. (i.e., Doctor of Engineering) degrees are offered through the School of Engineering. A Doctor of Physical Therapy program is offered through the School of Education and Health Sciences. The College of Arts and Sciences offers master's programs in:

- Biology
- Chemistry
- Communication
- Computer Science
- English
- Applied Mathematics
- Financial Mathematics
- Mathematics Education (in collaboration with the Department of Teacher Education)
- Pastoral Ministry
- Psychology
- Public Administration
- Theological Studies

A concentration in Music Education is offered through and in collaboration with the School of Education and Health Sciences. Individual interdisciplinary studies and several post-baccalaureate certificate programs are also available.

The School of Business Administration offers a Master's of Business Administration with concentrations in:

- Finance
- Cyber Security
- Marketing

A joint degree in Accounting and MBA (BS/MBA) is available. The J.D./MBA joint degree program is also offered to students meeting the admission requirements of both the Law School and the School of Business Administration. A post-Master's certificate is available in the above concentration areas or in a customized area.

The School of Education and Health Sciences offers a Master of Science in Education (MSE) degree, with programs in:

- Teacher Education
- Educational Leadership
- Counselor Education
- Exercise Science

The School also offers an Educational Specialist degree in Educational Leadership and School Psychology, as well as a graduate licensure program.

The School of Engineering offers the Master of Science degree in:

- Aerospace Engineering
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Electro-Optics
- Engineering
- Engineering Management
- Engineering Mechanics
- Materials Engineering
- Management Science

The School of Law offers the Master of Laws (LL.M.), the Master in the Study of Law (M.S.L.) and the Juris Doctor (J.D.) degrees.

## Brief History

In the summer of 1849, Father Leo Meyer and Brother Charles Schultz, the first Marianist missionaries to America, journeyed from Alsace in France to Cincinnati, Ohio, where they intended to establish a base for the order in this country. They arrived, however, during a cholera epidemic, so Bishop John Purcell of Cincinnati soon sent Father Meyer
to Dayton to minister to the sick of Emmanuel Parish. Here he met John Stuart, whose little daughter died of cholera the year before. Mr. Stuart wanted to sell his Dayton property and return with his wife to Europe. On March 19, 1850, the feast of St. Joseph, Father Meyer purchased Dewberry Farm from him and renamed it Nazareth. Mr. Stuart accepted a medal of St. Joseph and a promise of $\$ 12,000$ at $6 \%$ interest in return for 125 acres, including vineyards, orchards, a mansion, and various farm buildings. Meanwhile, more Marianists arrived, and Nazareth became the first permanent foundation of the Society of Mary in the Western Hemisphere.

The University of Dayton had its earliest beginnings on July 1, 1850, when St. Mary's School for Boys, a frame building that not long before had housed farm hands, opened its door to fourteen primary students from Dayton. In September, the classes moved to the mansion, and the first boarding students arrived. Father Meyer served as administrator, Brother Maximin Zehler taught, Brother Schultz cooked, and Brother Andrew Edel worked as farmer-gardener.

Five years later the school burned to the ground, but within a year classes resumed. By 1860, when Brother Zehler became president, enrollment approached one hundred. The Civil War had little direct effect on the school because most of the students were too young to serve. St. Mary's grew as college preparatory courses were started in 1861. Then came a novitiate and a normal school for Marianist candidates. An old history refers to the period of 1860-75 as "the brick-and-mortar years." The Chapel of the Immaculate Conception was completed in 1869. In 1870, visitors marveled at new St. Mary Hall, the largest building in Dayton, and called it "Zehler's Folly." The new "college department" moved into it in 1871. (St. Mary Hall is now listed in the National Register of Historic Places.)

In 1882, the institution was incorporated and empowered to confer collegiate degrees under the laws of the State of Ohio. In 1883, another devastating fire visited the campus, but this time some of the buildings were saved. The statue now known as Our Lady of the Pines was erected in gratitude, and the following year St. Joseph Hall was built, symbolizing the renewed confidence of the Dayton Marianists. In a more famous emergency, the school was spared by water as it had not been by fire. Because of its hillside location, it survived the Great Flood of 1913 untouched and was able to give shelter to 600 refugees.

St. Mary's had reorganized in 1902 into four departments-classical, scientific, academic, and preparatory. In 1905 it added the Commercial Department, which would become the Department of Commerce and Finance in 1921, the Division of Business Organization in 1924, and ultimately the School of Business Administration. Four engineering departments, appearing from 1909 to 1920, were to become the Engineering Division. In 1915, the Marianist training program (novitiate and normal school) was moved to Mount St. John's.

Known at various times as St. Mary's School, St. Mary's Institute, and St. Mary's College, the school assumed its present identity in 1920, when it was incorporated as the University of Dayton. The same year, the elementary division was closed, the Division of Education was organized, and the University started its tradition of evening and Saturday classes to serve adults in the surrounding community. In 1922, the College of Law opened, also with evening classes. Other graduate programs followed, to augment the professional degree programs which distinguished the University from many of Ohio's other independent institutions of higher learning. In 1923, the first summer session was held; its classes, like those of the law college, were open to women as well as men.

The 1930s, with the Great Depression, were in many ways a time of retrenchment for the University of Dayton as for most other American schools. The Dayton Marianists had survived cholera, smallpox, and influenza, wars, fire and flood, and (in 1924) a Ku-Klux-Klan crossburning on the campus. In 1935, even as the University turned its preparatory school functions over to Chaminade High School and graduated what was to be its last class in law for almost forty years, it inaugurated a college for women, with sisters of Notre Dame in charge of twenty-seven entering female students. Two years later, the college for women closed; all divisions opened to women, and the University became fully coeducational.

Enrollment had passed a thousand when World War II broke out. By 1950, with the return of the veterans, it reached more than 3,500. In 1967, it topped 10,000. But then, with the expansion of a community college and the establishment of a state university nearby, enrollment declined, and the resulting retrenchment was exacerbated by rising inflation and the energy crisis. Nor did the social turbulence and activism of the late 1960s and early 1970s bypass the University of Dayton. Some students and faculty protested against the Vietnam War, compulsory ROTC, and defense-related research activities. They campaigned also for changes in the curriculum, seeking more opportunities for meeting personal needs and goals. In response, the University gave greater responsibility to students for their own academic decisions, and it initiated interdisciplinary programs, self-directed learning, and various experimental courses and methods. Meanwhile, the profile of the student body changed. The 1960s saw significant increases in female and minority students. In the 1970s, there was a shift to a largely residential student body, and at the same time many more "nontraditional" (older) students matriculated. By the mid-1970s, total enrollment steadied at more than 10,000, with about 6,000 full-time undergraduates.

The University held its first general public fund-raising campaign in order to erect Wohlleben Hall in 1958 and Sherman Hall in 1960. Both campus and off-campus residences, residence halls, apartments, and houses were added and improved as such emergency accommodations as surplus Army barracks and an adapted Army hospital (renamed the West Campus) were phased out.

Long-range planning has helped integrate new buildings and old and made the campus more livable by increasing its beauty as well as its efficiency. In 1986, old and new combined in the design of the Anderson Center between Rike Hall and Miriam Hall. When fire ravaged St. Joseph Hall in 1987, the University was able to rebuild and restore it without harming the architectural integrity of that historic corner of campus. Keeping pace with the needs of the University, the Jesse Philips Humanities Center opened in 1993, and Joseph E. Keller Hall was built for the School of Law in 1997. In addition, the University has renovated Miriam Hall, converted its child care center into an early childhood demonstration school called the Bombeck Family Learning Center and completed the first phases of a modern Science Center. In 2002, the University of Dayton Arena underwent a modernization, placing it among the best venues for basketball in the country. The Donoher Basketball Center, a major addition to the UD Arena giving UD a premier basketball facility for both playing and training, was dedicated in 1998.

As the University of Dayton entered the 21st century, it built modern student facilities, including ArtStreet and Marianist Hall (2004) and RecPlex (2006).

The edifices are not the only changes on campus. In 1960, the University reorganized academically and administratively. Administrative changes saw the formation of the College of Arts and Sciences from what had
been two separate units. Other divisions became the Schools of Business Administration, Education and Engineering. In 1970, the University charter was amended and lay members now joined the Marianists on the Board of Trustees. In 1974, the School of Law reopened.

Academically, the University has continued to expand and enrich its offerings and support services, especially since mid-century. Graduate studies, abandoned during World War II, resumed in 1960, with the School of Education leading the way. In 1969, the Department of Biology inaugurated the first doctoral program since 1928. The School of Engineering introduced two doctoral programs in 1973, and in 1992, the first doctoral degrees in educational leadership were awarded. In 1997, the Board of Trustees approved a doctoral program in theology with a focus on the Catholic experience in the United States. It was the first such doctoral program on a Catholic campus nationally.

In 1975, the Marian Library, which had grown to international renown since its inception in 1943, founded the International Marian Research Institute (IMRI), which was incorporated in 1984 as a branch of the Marianum in Rome. IMRI is empowered to confer licentiate and doctoral degrees in theology, with a specialization in Mariology. The Marian Library now holds the world's largest collection of print materials on Mary, the mother of Jesus.

For all undergraduates, a general education plan was adopted in 1983 to foster integration of the liberal arts in a professional education. In 1990, the Academic Senate approved a revision of the general education requirements that called for an integrated base of four humanities courses complemented by clusters of other courses, requiring various disciplines to focus on a single theme. The Academic Senate revised and renamed the general education requirements again in 2010 to emphasize seven mission-related student learning outcomes: scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation. The Common Academic Program (CAP), taken by all undergraduates, integrates all aspects of students' University experiences beginning with courses in the Humanities Commons and culminating in a Capstone experience.

The University has always maintained a tradition of innovation. In 1874, St. Mary's Institute's new Play House gymnasium was the only one of its kind in Ohio, and it is probable that the first organized basketball game in the state took place there. A system of elective studies was inaugurated in 1901. In 1924, the University was the first school to be granted a charter by the National Aeronautical Association. It was one of the first in the nation to offer a course in biophysics (1935). In 1948, it was a pioneer in student ratings of professors, and in 1952, it invited persons over 60 to attend its evening classes as guests. Its graduate program in laser optics was one of the earliest in the country. It was one of the first educational institutions to adopt electronic data-processing equipment and to offer degrees in computer science. In 1999, the University of Dayton was the first in the nation to offer an undergraduate degree program in human rights. The University is currently developing partnerships with top universities in China, including Nanjing University, one of that nation's leading research institutions.

More than just a breeding ground for academic excellence, the University also responds to the needs of society and the region.

Sponsored research at the University began in 1949 with a few faculty members and student assistants doing part-time research for industry and government agencies. In 1956, the University of Dayton Research Institute (UDRI) was formed to consolidate the administration of the growing research activities. Annual research volume has increased from
$\$ 3,821$ in 1949 , to more than $\$ 85$ million today. The University of Dayton ranks second in the nation in funding for materials research.

Named for Brother Raymond L. Fitz, S.M., the University's longestserving president, the Fitz Center for Leadership in Community, founded in 2002, connects students and faculty to the community through service learning, social justice and ongoing involvement.

Among the University's other community collaborations is the Dayton Early College Academy, a public high school founded in partnership with the Dayton Public Schools. DECA, whose first class graduated in 2007, is the only charter school in the country operated by a Catholic university.

The University long-range plans include incorporating nearly 50 acres purchased from NCR in 2005. The land, lying between the academic core of campus and the Arena Sports Complex, increased the size of campus by nearly a quarter.

From its humble roots as a private boarding school for boys, the University of Dayton today ranks among the best Catholic universities in the country. It is the largest independent university in Ohio and draws students from around the country and the world.

## Academic Calendar 2013-2014

## Subject to change

## FALL 2013

| Date | Description |
| :---: | :---: |
| Mon, Aug 5 | Degrees conferred--no ceremony |
| Fri, Aug 16 | New Faculty Orientation |
| Sat-Tue, Aug 17-20 | New Student Orientation |
| Sat, Aug 17 | First Year Student Move-In for Fall Term |
| Sun, Aug 18 | Upperclass Student Move-In for Fall Term |
| Tue, Aug 20 | New Student Convocation |
| Tue, Aug 20 | Last day to complete registration |
| Wed, Aug 21 | Classes begin at 8:00 a.m. |
| Tue, Aug 27 | Last day for late registration, change of grading options and schedules |
| Mon, Sep 2 | Labor Day--no classes |
| Fri, Sept 6 | Faculty Meeting (Boll Theatre) at 3:00 p.m. |
| Tue, Sep 10 | Last day to change Second Session and full Summer Term grades |
| Wed, Sep 11 | Last day to drop classes without record |
| Fri, Sep 20 | Academic Senate Meeting (KU Ballroom) from 3:00 p.m. to 5:00 p.m. |
| $\begin{aligned} & \text { Fri-Sun, Sep } \\ & 27-29 \end{aligned}$ | Family Weekend 2013 |
| Wed, Oct 9 | Med-Term Break begins after last class |
| Mon, Oct 14 | Classes resume at 8:00 a.m. |
| Tue, Oct 15 | Last day for Graduate and Doctoral students to apply for December 2013 graduation |
| Wed, Oct 16 | First-Year students' midterm progress grades due by 4:00 p.m. |
| Fri, Oct 18 | Academic Senate Meeting (KU Ballroom ) from 3:00 p.m. to 5:00 p.m. |
| Fri, Nov 1 | Last day for Undergraduate students to apply for May 2014 graduation |


| Mon, Nov 4 | Last day to drop classes with record of W |
| :---: | :---: |
| Fri, Nov 15 | Academic Senate Meeting (KU Ballroom) from 3:00 p.m. to 5:00 p.m. |
| Tue, Nov 26 | Thanksgiving recess begins after last class |
| Sat, Nov 30 | Saturday classes meet |
| Mon, Dec 2 | Classes resume at 8:00 a.m. |
| Thu, Dec 5 | Last day of classes |
| Fri, Dec 6 | Feast of the Immaculate Conception/Christmas on Campus--no classes |
| Sat, Dec 7 | Study Day |
| Sun, Dec 8 | Study Day |
| Mon-Fri, Dec 9-13 | Exams--Final Term ends after final examinations |
| Fri, Dec 13 | Academic Senate Meeting (KU Ballroom) from 3:00 p.m. to 5:00 p.m. |
| Fri, Dec 13 | University Housing closes for Christmas Break at 6:00 p.m. |
| Sat, Dec 14 | Diploma Exercises at 9:45 a.m. |
| Tue, Dec 17 | Grades due by 9:00 a.m. Deficiency slips due to Deans' offices |
| Thu, Dec 19 | Grades posted |
| Tue, Jan 21 | Last day to change Fall Term grades |
| CHRISTMAS BREAK |  |
| Date | Description |
| Sun, Dec 15 | Christmas Break begins |
| Sun, Jan 12 | Christmas Break ends |
| SPRING 2014 |  |
| Date | Description |
| Fri, Jan 10 | Last day to complete registration |
| Mon, Jan 13 | Classes begin at 8:00 a.m. |
| Fri, Jan 17 | Last day for late registration, change of grading options and schedules |
| Fri, Jan 17 | Academic Senate Meeting (KU Ballroom) from 3:00 p.m. to 5:00 p.m. |
| Mon, Jan 20 | Martin Luther King, Jr. Day -- no classes |
| Tue, Jan 21 | Last day to change Fall Term grades |
| Sat, Feb 1 | Last day for Graduate and Doctoral students to apply for May 2014 graduation |
| Mon, Feb 3 | Last day to drop classes without record |
| Fri, Feb 14 | Academic Senate Meeting (KU Ballroom) from 3:00 p.m. to 5:00 p.m. |
| Wed, Mar 5 | Mid-Term Break begins after last class |
| Mon, Mar 10 | Classes resume at 8:00 a.m. |
| Wed, Mar 12 | First-Year students' midterm progress grades due by 4:00 a.m. |
| Fri, Mar 14 | Academic Senate Meeting (KU Ballroom) from 3:00 p.m. to 5:00 p.m. |
| Sat, Mar 15 | Last day for Undergraduate students to apply for August 2014 graduation |
| Tue, Apr 1 | Last day for Undergraduate students to apply for December 2014 graduation |
| Wed, Apr 2 | Last day to drop classes with record of W |


| Wed, Apr 9 | Bro. Joseph W. Stander Symposium-Alternate Day of <br> Learning |
| :--- | :--- |
| Wed, Apr 16 | Easter Recess begins after last class |
| Mon, Apr 21 | East Monday-- no day classes-- classes resume at <br> 4:30 p.m. |
| Fri, Apr 25 | Last day of classes |
| Sat, Apr 26 | Study Day |
| Sun, Apr 27 | Study Day |
| Mon-Fri, Apr 28- | Exams-- Spring Term ends after final examinations |
| May 2 |  |
| Sat, May 3 | Doctoral/Graduate Commencement Exercises- Time <br> TBD |
| Sun, May 4 | Undergraduate Commencement Exercises at 9:45 <br> a.m. |
| Tue, May 6 | Grades due by 9:00 a.m. Deficiency slips due in <br> Deans' offices |
| Thu, May 8 | Grades posted <br> Mon, Jun 9 |
| Last day to change Spring Term grades |  |

SUMMER 2014-- FIRST SESSION

| Date | Description |
| :---: | :---: |
| Fri, May 9 | Last day to complete registration |
| Fri, May 9 | Faculty Meeting (Boll Theatre) at 3:00 p.m. |
| Sat, May 10 | Saturday classes begin |
| Mon, May 12 | Classes begin at 8:00 a.m. |
| Tue, May 13 | Last day for late Summer Term-First Session registration, change of grading options and schedules |
| Thu, May 15 | Last day for late full Summer Term registration, change of grading options and schedules |
| Wed, May 21 | Last day to drop without record from First Session classes |
| Mon, May 26 | Memorial Day-- no classes |
| Mon, Jun 9 | Last day to drop with record of W from First Session classes |
| Mon, Jun 9 | Last day to change Spring Term grades |
| Fri-Sat, Jun 20-21 | Exams-- full Summer Term classes do not meet First Session ends after final examinations |
| Tue, Jun 24 | Grades due by 9:00 a.m. Deficiency slips due in Deans' offices |
| Thu, Jun 26 | Grades posted |
| Tue, Jul1 | Last day for Graduate and Doctoral students to apply for August 2014 graduation |
| Wed, Jul 2 | Last day to drop without record from full Summer Term classes |
| Tue, Jul 29 | Last day to change First Session grades |

## SUMMER 2014-- SECOND SESSION

| Date | Description |
| :--- | :--- |
| Fri, Jun 20 | Last day to complete registration |
| Sat, Jun 21 | Saturday classes begin |
| Mon, Jun 23 | Second Session classes begin |
| Tue, Jun 24 | Last day for late Summer Term-- Second Session <br> registration, change of grading options and schedules |
| Tue, Jul 1 | Last day for Graduate and Doctoral students to apply <br> for August 2014 graduation |


| Wed, Jul 2 | Last day to drop without record from Second Session <br> and full Summer Term classes |
| :--- | :--- |
| Fri, Jul 4 | Independence Day-- no classes |
| Mon, Jul 14 | Last day to drop with record of W from Second <br> Session and full Summer Term classes |
| Tue, Jul 29 | Last day to change First Session grades |
| Fri-Sat, Aug 1-2 | Exams--Second Session and full Summer Term end <br> after final examinations |
| Mon, Aug 4 | Degrees conferred-- no ceremony <br> Grades due by 9:00 a.m. Deficiency slips due in |
| Thu, Aug 5 7 | Leans' offices |
| Tue, Sep 9 | Grades posted <br> Last day to change Second Session and full Summer <br> Term grades |

## Institutional Memberships

The University holds institutional membership in the following:

- American Association of Colleges for Teacher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Association of University Women
- American College Personnel Association
- American Council on Education
- American Society for Engineering Education
- Association of American Colleges and Universities
- Association of American Law Schools
- Association of Catholic Colleges and Universities
- Association of College and University Housing Officers
- Association of Governing Boards of Universities and Colleges
- Association of Independent Colleges and Universities of Ohio
- Association to Advance Collegiate Schools of Business
- College and University Professional Association for Human Resources
- College Board
- Cooperative Education and Internship Association
- Council for Advancement and Support of Education
- Council of Graduate Schools
- Dayton Area Chamber of Commerce
- Dayton Art Institute (sponsoring)
- Institute of International Education
- National Association of College and University Food Services
- National Association of Independent Colleges and Universities
- National Association of Student Personnel Administrators
- National Catholic Education Association
- North Central Association of Colleges and Schools Higher Learning Commission*
- Ohio Academy of Science
- Ohio Association of Colleges for Teacher Education
- Ohio Association of Private Colleges for Teacher Education
- Ohio Campus Compact
- Ohio Continuing Higher Education Association
- Southwestern Ohio Council for Higher Education
* North Central Association

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## Libraries

The University Libraries are comprised of:

- Roesch Library
- The Marian Library
- The University Archives and Special Collections
- The International Marian Research Institute

Roesch Library houses books, journals, videos, DVDs, CDs, government documents, and microforms for both graduate and undergraduate students. Roesch Library is open 114 hours a week throughout much of the academic year and 24 hours per day during finals. Reference assistance is provided in a variety of forms including in person, email, IM, telephone, and private consultations. Roesch Library subscribes to over 280 databases on a variety of subjects and provides access to more than 69,000 journals in print and electronic formats. Its book (print and electronic) and microform collections include over 1.4 million volumes.

The Libraries also provide comfortable study areas, photocopiers, and individual and group study rooms. Roesch Library has 20 computer workstations located on the first floor and 37 computer workstations located on the second floor. All workstations provide access to the campus network, OhioLINK resources, and the Internet. These computers run Microsoft Office applications, SPSS, and audio and video editing software. Group Project Space, also located on the second floor, has ten workstations equipped with double monitors that allow for group collaboration. All floors have data ports and wireless network access that allow students to access campus and information networks through notebook computers.

The Libraries are members of OhioLINK, a cooperative venture of university and college libraries and the Ohio Board of Regents. OhioLINK partners have created a common information network providing rapid access to and delivery of over 49 million items available at college and university libraries across the state. All of the libraries affiliated with OhioLINK provide on-site borrowing privileges to students and faculty associated with the University. Access to the Libraries' Web page, databases, and online catalog (http://www.udayton.edu/libraries).

The Marian Library (seventh floor of the Roesch Library) is recognized as the world's largest collection of published materials on the Virgin Mary. Its comprehensive collection embraces the works treating the Virgin Mary as found in Scripture, tradition, doctrine, history, art, popular culture, spirituality, and devotion. The multi-language collection includes over 95,000 books ( 6,000 printed before 1800), 200 periodicals, a clipping file of over 60,000 items, a Marian stamp collection, a Christmas creche collection, statues, medals, postcards, and works of art.

Publications include:

- Marian Studies (papers given at the annual meeting of the Mariological Society of America)
- Marian Library Studies (original research on Marian topics)
- The twice-yearly Marian Library Newsletter

United with the Marian Library is the International Marian Research Institute (IMRI), affiliated with the Pontifical Theological Faculty

Marianum in Rome. IMRI offers courses in Marian studies as well as pontifical academic degrees (Licentiate and doctorate) in theology with specialization in Mariology. The Marian Library's collections can be accessed via the University Libraries' online catalog. Hours, an explanatory video, and information on current art exhibits can be found on the Mary Page (http://campus.udayton.edu/mary).

The University of Dayton School of Law Library is located in Joseph E. Keller Hall. Its collection contains over 190,000 volumes and over 676,000 physical units of microforms. The open-stack arrangement of the Law Library permits easy access to all materials. For additional information visit the webpage (http://community.udayton.edu/law/library).

The Brother Louis J. Faerber, S.M., Curriculum Materials Center (CMC) houses the SOEHS's specialized education collections and is located in Chaminade Hall. Its collection includes:

- Professional education books and journals
- Children and young adult literature
- Elementary and secondary textbooks
- Standardized assessments
- Teaching aids (games \& manipulatives)
- DVD's
- CD's
- Videocassettes
- Audiocassettes
- LP records
- Charts
- Material kits
- Other resources

The CMC also houses research projects, theses, and dissertations completed for the SOEHS's respective graduate programs. A copier, four networked computer workstations, the Ellison Press, Accu-Cut Machine, and an assortment of letter and shape dies are available for student use.

## Mission

The University of Dayton is a comprehensive Catholic university, a diverse community committed, in the Marianist tradition, to educating the whole person and to linking learning and scholarship with leadership and service.

The University of Dayton is a comprehensive university committed to offering a broad range of programs in liberal arts, the sciences, and the professions at the undergraduate level, to providing selected programs on the graduate level to meet the needs of the community and region, to sponsoring timely continuing education programs. As comprehensive, the University views learning and scholarship as a shared task of discovering, integrating, applying and communicating knowledge at the intersections of liberal and professional education, across the disciplines, and through combining theory with practice.

As Catholic, the University commits itself to a distinctive vision of learning and scholarship that includes: a common search for truth based on the belief that truth can be more fully known and is ultimately one; a respect for the dignity of each human person created in the image and likeness of God; and an appreciation that God is manifested sacramentally through creation and the ordinary things in life. Ultimately, a Catholic vision of the intellectual life is based upon the acceptance of the revelation of God in Jesus Christ as it has been received and handed on by the Church.

This challenge calls for integration of the human and the divine, reason and faith, and promotes true understanding through a person's head and heart. The University welcomes persons of all faiths and persuasions to participate in open and reflective dialogue concerning truth and the ultimate meaning of life.

Founded in the Marianist tradition, the University is committed to a vision of a distinctive educational community. As Marianist, the University focuses on educating the whole person in and through a community that supports and challenges all who become a part of it. The University forms an educational community thriving on collaboration by people from diverse backgrounds with different skills who come together for common purposes. The University as Marianist challenges all its members to become servant-leaders who connect scholarship and learning with leadership and service

This university community-comprehensive, Catholic and Marianist-exists not for itself, but to render service. The University creates an environment in which its members, working in a scholarly manner, are free to evaluate the strengths and weaknesses of their own work and the work of others. In partnership, through the Research Institute, Campus Ministry, as well as numerous student organizations, the University works with others to improve the human community.

## Academic Calendar 2014-2015

Subject to change

## FALL 2014

| Date | Description |
| :---: | :---: |
| Mon, Aug 4 | Degrees conferred--no ceremony |
| Thu, Aug 21 | New Faculty Orientation |
| $\begin{aligned} & \text { Sat-Tue, Aug } \\ & 23-26 \end{aligned}$ | New Student Orientation |
| Sun, Aug 24 | Upperclass students move into UD Housing |
| Tue, Aug 26 | New Student Convocation |
| Tue, Aug 26 | Last day to complete registration |
| Wed, Aug 27 | Classes begin at 8:00 a.m. |
| TBD | New Graduate Assistant Orientation 8:30 a.m. - 4:00 p.m. |
| Mon, Sep 1 | Labor Day-- no classes |
| Wed, Sep 3 | Last day for late registration, change of grading options and schedules |
| Tue, Sep 9 | Last day to change Second Session and full Summer Term grades |
| Wed, Sep 17 | Last day to drop classes without record |
| Wed, Oct 8 | Mid-Term Break begins after last class |
| Mon, Oct 13 | Classes resume at 8:00 a.m. |
| Wed, Oct 15 | Last day for Graduate and Doctoral students to apply for December 2014 graduation |
| Wed, Oct 22 | First-Year students' midterm progress grades due by 4:00 p.m. |
| TBD | Family Weekend |
| Sat, Nov 1 | Last day for Undergraduate students to apply for May 2015 graduation |
| Mon, Nov 10 | Last day to drop classes with record of W |
| Tue, Nov 25 | Thanksgiving recess begins after last class |
| Sat, Nov 29 | Saturday classes meet |


| Mon, Dec 1 | Classes resume at 8:00 a.m. |
| :---: | :---: |
| Mon, Dec 8 | Feast of the Immaculate Conception/Christmas on Campus--no classes |
| Fri, Dec 12 | Last day of classes |
| Sat, Dec 13 | Study Day |
| Sun, Dec 14 | Study Day |
| Mon-Fri, Dec $15-19$ | Exams--Fall Term ends after final examinations |
| Fri, Dec 19 | University Housing closes for Christmas Break at 6:00 p.m. |
| Sat, Dec 20 | Diploma Exercises at 9:45 a.m. |
| Tue, Dec 23 | Grades due by 9:00 a.m. |
| Fri, Dec 26 | Grades posted |
| Mon, Jan 26 | Last day to change Fall Term grades |
| CHRISTMAS BREAK |  |
| Date | Description |
| Sun, Dec 21 | Christmas Break begins |
| Sun, Jan 11 | Christmas Break ends |
| SPRING 2015 |  |
| Date | Description |
| Fri, Jan 9 | Last day to complete registration |
| Mon, Jan 12 | Classes begin at 8:00 a.m. |
| Fri, Jan 16 | Last day for late registration, change of grading options and schedules |
| Mon, Jan 19 | Martin Luther King, Jr. Day--no classes |
| Mon, Jan 26 | Last day to change Fall Term grades |
| Sun, Feb 1 | Last day for Graduate and Doctoral students to apply for May 2015 graduation |
| Mon, Feb 2 | Last day to drop classes without record |
| Wed, Mar 4 | Mid-Term Break begins after last class |
| Thu, Mar 5 | Thursday only Graduate classes meet |
| Mon, Mar 9 | Classes resume at 8:00 a.m. |
| Wed, Mar 11 | First-Year students' midterm progress grades due by 4:00 p.m. |
| Sun, Mar 15 | Last day for Undergraduate students to apply for August 2015 graduation |
| Wed, Apr 1 | Last day for Undergraduate students to apply for December 2015 graduation |
| Wed, Apr 1 | Easter Recess begins after last class |
| Mon, Apr 6 | Easter Monday--no day classes--classes resume at 4:30 p.m. |
| Wed, Apr 8 | Last day to drop classes with record of W |
| TBD | Bro. Joseph W. Stander Symposium- Alternate Day of Learning |
| Fri, Apr 24 | Last day of classes |
| Sat, Apr 25 | Study Day |
| Sun, Apr 26 | Study Day |
| Mon-Fri, Apr 27May 1 | Exams-- Spring Term ends after final examinations |
| Sat, May 2 | Doctoral/Graduate Commencement Exercises at 12:45 p.m. |
| Sun, May 3 | Undergraduate Commencement Exercises at 9:45 a.m. |


| Tue, May 5 | Grades due by 9:00 a.m. Deficiency slips due in Deans' offices |
| :---: | :---: |
| Thu, May 7 | Grades posted |
| Mon, Jun 8 | Last day to change Spring Term grades |
| SUMMER 2015--FIRST SESSION |  |
| Date | Description |
| Fri, May 8 | Last day to complete registration |
| Sat, May 9 | Saturday classes begin |
| Mon, May 11 | Classes begin at 8:00 a.m. |
| Tue, May 12 | Last day for late Summer Term-First Session registration, change of grading options and schedules |
| Thu, May 14 | Last day for late full Summer Term registration, change of grading options and schedules |
| Wed, May 20 | Last day to drop without record from First Session classes |
| Mon, May 25 | Memorial Day--no classes |
| Mon, Jun 8 | Last day to drop with record of W from First Session classes |
| Mon, Jun 8 | Last day to change Spring Term grades |
| Fri-Sat, Jun 19-20 | Exams--full Summer Term classes do not meet- First Session ends after final examinations |
| Tue, Jun 23 | Grades due by 9:00 a.m. Deficiency slips due in Deans' offices |
| Thu, Jun 25 | Grades posted |
| Wed, Jul 1 | Last day for Graduate and Doctoral students to apply for August 2015 graduation |
| Wed, Jul 1 | Last day to drop without record from full Summer Term classes |
| Tue, Jul 28 | Last day to change First Session grades |

## SUMMER 2015--SECOND SESSION

| Date | Description |
| :--- | :--- |
| Fri, Jun 19 | Last day to complete registration |
| Sat, Jun 20 | Saturday classes begin |
| Mon, Jun 22 | Second Session classes begin <br> Last day for late Summer Term-Second Session <br> registration, change of grading options and schedules |
| Wed, Jul 1 | Last day for Graduate and Doctoral students to apply <br> for August 2015 graduation |
| Wed, Jul 1 | Last day to drop without record from Second Session <br> and full Summer Term classes |
| Fri, Jul 3 | Independence Day observed--no classes |
| Mon, Jul 13 | Last day to drop with record of W from Second <br> Session and full Summer Term classes |
| Tue, Jul 28 | Last day to change First Session grades |
| Fri-Sat, Jul 31- | Exams--Second Session and full Summer Term end <br> after final examinations |
| Aug 1 | Degrees conferred--no ceremony <br> Mon, Aug 3 |
| Tue, Aug 4 | Grades due by 9:00 a.m. Deficiency slips due in <br> Deans' offices |
| Thu, Aug 6 | Grades posted <br> Last day to change Second Session and full Summer <br> Term grades |
| Tue, Sep 8 |  |

## Off-Campus Academic Centers

The University of Dayton maintains an off-campus center for graduate study in Education \& Health Sciences (Columbus). All programs and courses are closely supervised by the dean of Education \& Health Sciences and the dean of the Graduate School. Most of these courses are taught by the faculty member teaching the same course on the main campus.

## Related University Services

Besides the regular day sessions, the University conducts special as well as regular evening and summer sessions and offers short-term workshops, institutes, and conferences. All credited courses, whenever offered or in whatever form, conform to the same standards and are governed by the same policies and regulations prevailing during the regular day sessions.

As part of a comprehensive strategy for adult education through Graduate, Professional and Continuing Education, Special Programs and Continuing Education especially serves the part-time students of the Dayton community to make the University and its course offerings, both credit and noncredit, more easily available to them. Similarly, the Office of International Student and Scholar Services and the Intensive English Program, located in the Center for International Programs, serves students, faculty, staff, and visiting scholars from other countries who are studying or working at the University.

To foster interdisciplinary efforts, the Office of the Provost can administer courses designated UDI (University of Dayton Interdisciplinary) to accommodate interschool offerings and experimental programs.

## Southwestern Ohio Council for Higher Education (SOCHE)

Students at the University of Dayton may register for courses for credit at Southwestern Ohio Council for Higher Education institutions (see below for a complete list) at the University of Dayton's rate per credit hour. Students will pay any applicable lab or related fees at the host institution. This policy applies only if the course is not available at the University of Dayton, space in the course is available, and pertains only to regular sessions of the academic year. The student also is required to have advisor's permission, must satisfy all course prerequisites, and must meet the host institution's admissions requirements. For more information go to www.soche.org. (http://www.soche.org)

The consortium of 22 colleges and universities was established to promote inter-institutional cooperation and community service. SOCHE holds regular conferences for faculty and staff, serves as a clearinghouse for the exchange of information, and promotes projects of educational research and experimentation. Many cooperation programs exist in:

- Teaching
- Research
- Publishing
- College finance and administration
- Other areas

Consortium member schools include:

- Air Force Institute of Technology
- Antioch College
- Antioch University Midwest
- Cedarville University
- Central Michigan University
- Central State University
- Clark State Community College
- Edison State Community College
- Kettering College of Medical Arts
- The Kettering Foundation
- Miami-Jacobs College
- Miami University-Middletown
- Miami University Regionals
- Sinclair Community College
- Southern State Community College
- United Theological Seminary
- Union Institute \& University
- University of Dayton
- Urbana University
- Wilberforce University
- Wilmington College
- Wittenberg University
- Wright State University


## Statement of Purpose

Approved by the Board of Trustees, May 14, 1969.
The University of Dayton, by tradition, by legal charter, and by resolute intent, is a church-related institution of higher learning. As such, it seeks, in an environment of academic freedom, to foster principles and values consonant with Catholicism and with the living traditions of the Society of Mary. Operating in a pluralistic environment, it deliberately chooses the Christian world-view as its distinctive orientation in carrying out what it regards as four essential tasks: teaching, research, serving as a critic of society, and rendering public service.

The University of Dayton has as its primary task to teach-that is, to transmit the heritage of the past, to direct attention to the achievements of the present, and to alert students to the changes and challenges of the future. It regards teaching, however, as more than the mere imparting of knowledge; it attempts to develop in its students the ability to integrate knowledge gained from a variety of disciplines into a meaningful and viable synthesis.

The University of Dayton holds that there is harmony and unity between rationally discovered and divinely revealed truths. Accordingly, it commits its entire academic community to the pursuit of such truths. It provides a milieu favorable to scholarly research in all academic disciplines, while giving priority to studies which deal with problems of a fundamentally human and Christian concern. It upholds the principle of responsible freedom of inquiry, offers appropriate assistance to its scholars, and endeavors to provide the proper media for the dissemination of their discoveries.

The University of Dayton exercises its role as critic of society by creating an environment in which faculty and students are free to evaluate, in a scholarly manner, the strengths and weaknesses found in human
institutions. While, as an organization, it remains politically neutral, objective, and dispassionate, it encourages its members to judge for themselves how these institutions are performing their proper tasks; to expose deficiencies in their structure and operation; to propose and actively promote improvements when these are deemed necessary.

The University of Dayton recognizes its responsibility to support, with means appropriate to its purposes, the legitimate goals and aspirations of the civic community and to cooperate with other agencies in striving to attain them. It assists in promoting the intellectual and cultural enrichment of the community; it makes available not only the resources of knowledge that it possesses, but also the skills and techniques used in the accumulation and dissemination of knowledge; and, above all, it strives to inspire persons with a sense of community and to encourage men and women of vision who can and will participate effectively in the quest for a more perfect human society.

## Student Life and Services

At the University of Dayton, you're not alone. And not just because you'll make friends at every turn, but because our faculty, staff and community are eager to help you along your path. To guide you, advise you and even help you land a job after graduation.

As a Catholic, Marianist institution, our educational philosophy addresses the needs of the whole person: mind, body and spirit. And you'll find a plethora of offices are here to support you every step of the way.

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## Affirmative Action Office

The Compliance and Affirmative Action Office aids in the implementation of the University's commitment to equal opportunity, affirmative action and diversity. This office ensures campus compliance with Federal, State, and Local laws pertaining to non-discrimination and affirmative action.

## Athletics

Many people throughout the country have come to know the University of Dayton through the accomplishments of its intercollegiate athletic teams. The mission of the Division of Intercollegiate Athletics at the University of Dayton reflects the mission of the University. That mission is embodied in the following core purposes:

- To educate the total person by integrating the primary academic purposes with educational possibilities and opportunities for young people beyond the classroom
- To teach the value of community and family through collaboration and teamwork
- To instill the fundamentals of sportsmanship, adhering to the values of respect, fairness, civility, honesty and responsibility
- To teach the tools of achievement, including self-discipline, personal responsibility and the setting of high standards
- To develop the individual talents of our student-athletes within the context of shared team goals
- To enhance diversity and minority opportunity at the University of Dayton
- To advance the University of Dayton locally, regionally and nationally through the more highly visible sports, particularly the men's basketball program

There are seven men's intercollegiate sports:
Fall

- Football
- Soccer
- Cross Country


## Winter

- Basketball

Spring

- Baseball
- Golf
- Tennis

There are ten women's intercollegiate sports:

## Fall

- Volleyball
- Soccer
- Cross Country

Winter

- Basketball
- Indoor Track

Spring

- Softball
- Rowing
- Golf
- Tennis
- Outdoor Track

Cheerleading tryouts, open to all students, are held each year.
Any student, male or female, who plans to participate in a varsity sport, must be certified through the NCAA Initial-Eligibility Clearinghouse. Additionally, student-athletes are required to complete a physical examination and provide documentation of their medical history and current insurance coverage.

The University of Dayton and its Division of Athletics are committed to abiding by the rules of the NCAA and the Atlantic 10 Conference. The volume and complexity of the NCAA rules prohibits addressing all the possible scenarios that may impact athletic eligibility. Therefore, you are encouraged to visit the Dayton Flyers website and NCAA (http:// www.daytonflyers.com/home) to access the various rules and policies which assist our University in continuing to operate with honor and dignity.

Please do not hesitate to contact the Compliance Staff if you should have any questions.

## University of Dayton

Athletics Division Compliance Office
300 College Park
Dayton, OH 45469-1230
Phone: (937) 229-4861
Fax: (937) 229-4969

## Bookstore

The University of Dayton Bookstore is a service facility operated by the University. Its primary purpose is to provide for the intellectual needs of the University community by making available all required textbooks and by providing a source for essential engineering, art and academic supplies which students need in their areas of study. The University Bookstore also offers a convenient source for students to purchase:

- Everyday necessities
- Gifts
- Greeting cards
- Clothing
- General books
- Health care items
- Many items bearing the University name and/or logo

American Express, Discover, Flyer Express, MasterCard, Visa, and personal checks are accepted with proper I.D.

## Campus Ministry

Faith formation and reflective religious dialogue play important roles in the education and development of the whole person at the University of

Dayton. As a primary agent in faith formation at UD, Campus Ministry, inspired by the University's Marianist tradition, forms persons and communities in a lived faith, expressed in worship, in challenging and compassionate relationships, and in commitment to justice and service.

With thirty staff persons and a wide variety of programs, UD has one of the largest and most active campus ministry programs anywhere.

Informed by the Roman Catholic Tradition, the vast majority of our programs appeal to students from different Christian backgrounds and those of other faiths. A full-time protestant campus minister serves as a part of the campus ministry team. Campus Ministry also connects students from other faith traditions to their respective faith communities off campus. A number of independent, religiously based student organizations exist on campus. Together, these provide a range of options and opportunities for students to be a part of a faith community during their time at UD.

Our primary activities for students are outlined below.

## Residence Life Ministry

Each residential area has campus ministers who actively engage students in faith based activities. Student leaders guide participation in activities such as faith sharing groups, bible studies, retreats, Mass, service and social opportunities, and other prayer experiences. In these and other ways, campus ministry is able to accompany, encourage and support students in areas of leadership, personal growth, and spiritual development.

## Center for Social Concern

Campus Ministry's Center for Social Concern is committed to faithbased social justice education, including direct service to the poor and marginalized, work on behalf of social justice and changing unjust structures in society that oppress and marginalize human beings. The Center for Social Concern provide regular BreakOut Trips, Summer Immersion Trips, and the Summer Appalachia Program, offer opportunities for service and justice education in domestic and international settings. Guest speakers and a number of other activities also contribute to these goals. At the heart of it all is a wide array of opportunities to reflect on the service and justice work in the context of faith.

## Retreats and Faith Communities

Over twenty retreats are offered each year for UD students. The retreats vary in size, style, theme, and focus to provide opportunities for faith development in many ways. There are quiet relaxing guided retreats, wilderness retreats, retreats specifically for first-year students and graduate students, large community focused retreats, interdenominational retreats, and more that foster faith development through activities, discussion, and prayer. Most retreats are led by student teams who prepare through weekly meetings.

Students also join small Christian communities called PORCH. These student led groups meet regularly and focus in unique ways including faith sharing, scripture study, and theological reflection.

Campus Ministry's Program for Christian Leadership offers Callings, a pre-orientation experience for incoming first year students focused on fostering faith, vocation, and leadership for new UD students as well as PORCH communities, retreat and leadership experiences.

## Liturgies and Prayer

Students, faculty, and staff are active in the liturgical life of the University as lectors, Eucharistic ministers, music ministers, Mass coordinators, and hospitality ministers at both daily and Sunday celebrations of the Eucharist. The sacrament of Reconciliation and Eucharistic adoration are scheduled regularly, and during the seasons of Advent and Lent, sung weekly Vespers are offered along with communal Reconciliation services. An interdenominational Christian worship service is held every Sunday during the academic year. Other opportunities for worship are available in the local community.

## Campus Recreation

The Department of Campus Recreation is located on the " M " level of the RecPlex. The RecPlex, which opened in January 2006, houses a state of the art recreation facility. Full time undergraduate students are eligible to use the RecPlex with their UD student ID. The facility may be used by graduate students who purchase a RecPlex Membership. Highlights of the building include:

- Main Gym with four full sized wood court basketball courts and three racquetball courts, one of which can be converted for squash.
- MAC Gym with two rubberized courts surrounded by a professional grade dasher board system adequately sized to play a variety of sports including tennis, indoor soccer, basketball, volleyball, and floor hockey.
- Aquatic Center with a 25 yard eight lane lap pool, four foot deep vortex leisure pool, diving well, and an eight-person spa.
- Fitness Studios A, B, and C which are used for a variety of instructional and group fitness classes.
- 10,000 sq. ft. Fitness Floor is home to 80 cardio machines and 70 strength training stations.
- Wellness Assessment Lab from which services such as athletic training, massage, and personal training consultation are offered.
- Four lane $1 / 8$ of a mile rubberized jogging track.

Campus Recreation is excited to feature a new $5+$ acre outdoor facility due to the installation of an infill turf surface. This new resource matches the quality of the RecPlex and provides year round access and a consistent surface for sports programming.

Campus Recreation offers many programs and facilities for students, including:

- Intramural Sports
- Sport Clubs
- Aquatics
- Fitness Programs
- Climbing Wall
- Strength and Cardio Equipment

Campus Recreation provides a variety of intramural activities in which anyone can find exercise surrounded by a spirit of fun and competition which is uniquely enhanced by our Marianist values. Activities include:

- Softball
- Flag Football
- Indoor and Outdoor Soccer
- Volleyball
- Basketball
- Dodge-ball
- Bowling
- Racquetball
- Golf meet
- Wallyball
- Floor Hockey

All students are invited to participate; ability is not important, just the desire to play. Please contact us at udintramurals@udayton.edu (udintramurals@notes.udayton.edu).

Another popular feature of the Department of Campus Recreation is the Sports Club Program. Currently, there are 36 recognized sports clubs on campus. The Sports Club Program offers students the opportunity to participate in a highly organized activity, while at the same time learning and developing new skills. Anyone interested in joining a sport club or starting a new one is encouraged to come in and speak with the Assistant Director of Sport Clubs.

Schedules concerning open recreation hours and scheduled events may be secured from the Campus Recreation Office. For more information please visit the website (http://campus.udayton.edu/~recsport) or call 229-2731.

## Career Related Experiences

The goal of any career related experience is to provide practical work experience associated with a student's course of study and/or life experience. All students pursuing a four-year degree should consider one or more of these programs.

- Internships
- Career-related summer employment
- Cooperative education
- Student contract program positions
- Externships and/or job shadowing
- Community/service learning
- Volunteer opportunities
- International placement or study/work abroad opportunities

Internship, summer employment, cooperative education, and student contract program positions are posted in Hire a Flyer. This online system is available at no charge to all students and alumni and may be accessed from the Career Services website (http://careers.udayton.edu).

## Career Services

The University of Dayton Career Services is a team of dedicated, caring professionals committed to providing excellent career related-resources, programs, services, and opportunities that build confidence and job search skills. We serve as a connecting point between students, faculty, alumni, and employers in an increasingly diverse and globally influenced job market. We are a leader in career planning and preparation, balancing the latest technology with personal guidance in the Marianist tradition.

Career advisors are available to discuss:

- Major selection
- Career direction
- Job search strategies
- Resume critique
- Networking
- Graduate school strategies
- Interview tips

Practice interviews with a career advisor can be digitally recorded and evaluated upon request to prepare the student for actual interviews by company representatives. All students, including first year students, are encouraged to utilize the services available. Appointments may be made by calling (937) 229-2045.

The Hire a Flyer Network is available from the Career Services web site for students to access job listings, post resumes, and register for events such as workshops, career fairs, and on-campus interviews with employers. Students may also access the Alumni Career Network through Hire a Flyer.

Career Fairs are scheduled Fall and Spring semesters for all majors. These events provide an opportunity for employers, students, and alumni to meet and discuss job opportunities. Approximately 150 companies attend looking for internship, co-op, and full-time employees.

The on-campus recruiting program is open to all students and alumni. On-campus recruiting is held October-April each year.

In addition, Career Services offers other venues for students to interact with employers as well as mini-courses, workshops, and presentations on a wide variety of job search and career related topics.

Additional information is available online (http://careers.udayton.edu).

## Center for International Programs

The Center for International Programs provides leadership, coordination, strategic planning, and administrative support for the internationalization of campus. In cooperation with other University departments and Dayton area organizations, the CIP operates programs and provides services which enhance intercultural education at the University of Dayton. The CIP is part of Academic Affairs and Learning Initiatives, under the Office of the Provost. Our areas include:

## Campus Engagement

The office of Campus Engagement facilitates opportunities for U.S. and international students, faculty and staff to learn from one another as a way to increase intercultural competence and awareness of one's own culture. We achieve this through strategic communication campus training and education; on-campus collaborative programming; and experiential learning opportunities including the Global Learning Living Community.

## Education Abroad

University study abroad programs including university summer study abroad programs are managed through the Office of Education Abroad. Additional resources are available through partner institutions and affiliate programs for semester and year-long study. The education abroad office offers advising for all students to encourage engagement in educational, research and service experiences abroad.

## International Student and Scholar Services

International Student and Scholar Services provides students and exchange visitors with immigration advising, workshops, orientation, academic and non-academic advising, as well as social and extracurricular activities. Services include support of international faculty
and research scholars and their dependents. The ISSS staff works collaboratively with other departments and organizations to advance the University's commitment to building a global community.

## Intensive English Program

The University's English as a Second Language program develops students' English skills in preparation for an undergraduate or graduate program or the work place. Course offerings include writing and grammar, reading and vocabulary, oral communication, listening and speaking,.

## Partnership and Exchanges

The University's international exchanges and partnerships are managed through the CIP. UD's partnerships with international universities and institutions benefit our students, faculty and staff through education abroad programs, semester and year-long exchange programs, research collaborations, and more.

## Community Wellness Services

Community Wellness Services supports and enhances the mission of the University of Dayton by promoting learning and personal development in the seven dimensions of wellness, providing alcohol and other drug interventions for students, and consultation to faculty and staff in these areas.

Through prevention and intervention, the student is guided to create a balanced lifestyle to contribute to their optimal personal development. Community Wellness Services utilizes science based wellness promotion strategies to support the Marianist principles of community living and contribute to the educational mission of the University.

Community Wellness Services is located on the first floor of Gosiger Hall and in the McGinnis Center. Phone (937) 229-1233. Hours are 8:30 a.m. - 4:30 p.m. Monday - Friday. The main mailing address is Community Wellness Services, 300 College Park, Dayton, OH 45469-2610.

## Commuter Student Services

Commuter Student Services provides an essential aspect to the University of Dayton campus. Commuter students knowledge and pride of the Dayton area help make out-of-town students feel more comfortable and at home while at the University. A lounge for commuter students is located in Kennedy Union 118 which is used for study, relaxation, and meeting friends. A telephone, microwave, and refrigerator are provided for the convenience of commuter students. Lockers are also available in the lounge and can be rented on a yearly basis.

The advisor to the commuter students provides services and facilities to meet the educational, developmental, and physical needs of these students and maintains contact with the academic and nonacademic areas of the University to increase understanding of these specific needs.

## Counseling Center

The main purpose of the Counseling Center is to assist students in self-development, including personal adjustment, career planning, and social skills building. All students in need of objective insights or merely "a listening ear" are encouraged to make use of the Center's services. No student's concern is too minor to explore. This is usually accomplished through one-to-one and group counseling, although there are opportunities for workshops on certain topics, consultation, and
outreach programming for student, faculty, and staff groups. The Center also provides career and personality testing services.

Because counseling often involves sensitive personal matters, discussions between counselors and students are strictly confidential. An exception occurs when students' problems become life threatening. The University and the student may enter into a contract to establish conditions regarding required treatment/assessment, if there is imminent danger. The student may decide to use the services offered by the University or to receive treatment elsewhere. In the latter case, periodic review by the University is required to confirm that contract conditions are met. For the welfare of the student, problems warranting treatment more intensive than the University can offer may require temporary medical withdrawal from the University. The student may be readmitted to the University upon acceptable completion of contract conditions. In life threatening circumstances, the University assumes the position that the parents or guardians of the student generally should be notified, and it will initiate such notification if the student has not done so within an appropriate time, refuses to do so, or is unable to do so. Other exceptions to confidentiality include a) receiving a court order, and b) when evidence suggests abuse or endangerment to a person under the age of 18 or over 60.

Matriculating undergraduates, graduate assistants, and law students are eligible for services at no charge. Other graduate students, Intensive English Program participants and non-matriculated undergraduate students pay on a fee-for-service basis. Contact us for information about charges and services. The Center is accredited by The International Association of Counseling Services, Inc.

## Dining Services

The University of Dayton Dining Services operates two full-service a la carte student dining facilities located in Kennedy Union, and Marycrest Complex, and two restaurants. Passports and The Grainary, located in the V.W. Kettering Residence Hall. The Emporium, a mini grocery store with a full service deli, is located in the Marianist Residence Hall, and Stuart's Landing, a convenience store, is located in Stuart Hall Complex. Dining Services also operates The Galley, a pretzel/ ice cream/ gourmet coffee shop located in Kennedy Union, and The Chill, a juice bar with healthy snack options, located in The RecPlex. All students living in Marycrest, Stuart, Founders, Marianist, and Virginia Kettering Residence Halls are required to purchase a meal plan. Meal plan options are as follows:

- Standard Plan - This structured meal plan has a spending allowance associated with it during specific meal periods. If you don't spend the entire allowance for that meal, you lost it. This plan starts with breakfast the first day of classes.
Note: Only one block of funds may be used during each meal period. For example, two blocks may not be used during the lunch meal period on the same day.
- The Flexible Plan- This is a debit style meal plan and provides complete flexibility, with no specific meal periods and no spending allowances.
Note: There are no refunds on debit plan balances however, $100 \%$ of balances remaining at the end of fall semester will roll over to the spring semester. At the end of spring semester $50 \%$ up to a maximum of $\$ 300$ will roll over to the next school year.

All students living in residence halls must have one of the following:

- Standard Plan (3 blocks per day, 7 days) $\$ 2,300.00$ / semester
- Flexible Plan (debit account) $\$ 2,300.00$ / semester

For complete information on meal plans, please visit http:// dining.udayton.edu

When a student does not choose a meal plan the default plan is the Flexible Plan.

Non-resident students may purchase a Neighborhood meal plan (debit account).

## FlyerCard

The FlyerCard is the official photo identification card at the University of Dayton. Your FlyerCard must be presented for purchases using your FlyerCard account(s), admission to the RecPlex, library services, and building access.

Your FlyerCard can be used as a form of payment for food, textbooks, supplies, laundry, printing, and other essential services. It is safe, fast, and convenient to use. You can view your transactions and the balance of your accounts by choosing the "My Account" link (https:// flyerexpress.udayton.edu).

To get your FlyerCard, stop by the Campus Card Services office located in room 102 of the Powerhouse. The first FlyerCard received is issued at no charge. All students must be registered for classes before receiving their card. Visit the FlyerCard website (http://FlyerCard.udayton.edu) for a detailed view of the FlyerCard program.

## Flyer Express

Flyer Express is a declining-balance prepaid account accessed with your FlyerCard. It is the convenient way to pay for products and services on and off campus. Your Flyer Express account eliminates the need to carry cash and saves you the hassle of searching for correct change. Flyer Express has you covered with whatever you need, 24 hours a day, 365 days a year. It is safe, fast, and convenient to use. The money in your Flyer Express account is carried over from one semester to the next and from year to year.

The Card Services office offers you multiple options to deposit funds into your account.

- Online (https://flyerexpress.udayton.edu/AddFlyer.aspx)
- Phone: (937) 229-2456 or 1-800-259-8864 (option 4)
- In person at the Campus Card Services office in the Powerhouse or the Bursar's office in St. Mary's Hall
- At kiosks located in all Dining Services locations and the Roesch Library.

Flyer Express is accepted at:

- All Dining Service locations
- Art Street Cafe
- UD Bookstore
- Residence Hall laundry
- Campus Copy Center
- Selected vending areas
- The Hangar
- The Galley
- Stuart's Landing
- Campus Computer Store
- Roesch Library
- Post Office
- The Chill
- KU Box Office
- The Blend
- The Blend Express
- Selected off campus businesses.

Flyer Express is used to pay for printing in the Library and many computer labs. Visit the FlyerCard website (http://FlyerCard.udayton.edu) for a current listing of off campus vendors that accept Flyer Express.

## Health Center

Medical care is available at the Health Center to all full-time and parttime undergraduate, graduate, and law students. During the academic year, the Health Center is open from 8:30 a.m. to 5:30 p.m. on weekdays, except University holidays. A physician is available for consultation every weekday morning and afternoon throughout the year, except University holidays. Summer hours are 8:30 a.m. to 4:30 p.m. with limited physician hours. Students should call the Health Center to schedule an appointment at 93131 or (937) 229-3131. In case of emergency, call Public Safety, (937) 229-2121.

Pre-admission physical examinations are not required, but students with chronic health problems are advised to have their physicians send records or recommendations to the medical director. Every student born after 1955 is required to show evidence of immunity to measles, mumps, and rubella. All students are required to fill out a tuberculosis screening. Students living in on-campus housing also have specific requirements for meningitis and hepatitis B vaccines, specified by Ohio law. A link to the Health Requirements form is located on the Health Center website (http:// www.udayton.edu/studev/healthcenter).

Undergraduate and law students are eligible for Health Center services at no extra charge. Graduate and IEP students pay on a fee for service basis at the Health Center. The charge for a physician visit ranges from $\$ 45$ to $\$ 75$, depending on the length of the visit and the type of services provided. Charges for medicines dispensed, allergy injections, laboratory tests, and x-ray examinations are billed to ALL STUDENTS.

The University believes it is the responsibility of each student to have health insurance and therefore expects students will have it for the entire time they are enrolled. Having health insurance protects both the student and the community. International students are required to provide evidence that they have health insurance that will cover them the entire time they are a student at the University of Dayton. The University is not responsible for covering health care costs.

All charges incurred at the Student Health Center are reported to the Bursar to be entered on the student's account with the University. Inquiries regarding bills should be made at the Health Center between 9:00 a.m. and 3:00 p.m. weekdays. Itemized statements can be provided upon patient request. These are not automatic and the Health Center does not bill outside insurance companies directly, however students should bring a copy of their health insurance/pharmacy cards to each visit.

## Housing and Residence Life

One of the most challenging and growth-oriented experiences available to students is residential living. The University strives to provide a cocurricular environment that both supports and challenges students to reach their full potential. Understanding, mutual respect, and openness to diversity foster the development of a positive community.

In order to attain this goal, professional, graduate, and undergraduate staffs in the Department of Housing and Residence Life are creating living and learning environments within University residence halls, suites, apartments, and houses. A student elected governance board or council represents residential student opinions and assists the residence life staff in providing programmatic initiatives for each on-campus living area.

All first-year and second-year students are required to live in UD housing unless they are married, are twenty-one years of age or older, or are local residents living with their legal guardian at their permanent residence within 40 miles of the University of Dayton campus. Junior and senior students have the opportunity to live in UD apartments and houses or to choose to live in non-University housing.

Upon official acceptance to the University of Dayton, the Office of Enrollment Management provides students with information and instructions for securing residential living accommodations. Questions regarding housing can be directed to Housing and Residence Life at (937) 229-3317 or email housing@udayton.edu (housing@notes.udayton.edu) or visit the Housing and Residence Life website (http://housing.udayton.edu).

## International Student and Scholar Services Office

The International Student and Scholar Services Office provides students and exchange visitors with immigration advising, workshops, orientation, academic and non-academic advising, as well as social and extracurricular activities. ISSS extends its services and support to international faculty and research scholars and their dependents. The ISSS works collaboratively with other departments and organizations to advance the University's commitment to building a global community.

ISSS also presents Bridges, the international student orientation, every August, January, and May. All international students new to the University of Dayton must attend. During Bridges, ISSS assigns immigration check-in times to students. Completing immigration check-in is vital to maintaining $\mathrm{F}-1 / \mathrm{J}-1$ status. All new undergraduate international students are also required to attend the University's New Student Orientation, for all new undergraduate students.

## Student Life and Kennedy Union

A variety of cultural, educational, social, and recreational activities are presented in the Union regularly to enrich and enhance academic life and foster a spirit of community. In addition, this office provides support, direction, and programming opportunities for students and officially recognized student organizations. Activities in the union include game shows, trivia contests, movie nights, concerts, theatrical productions, lectures, dance ensembles, and recitals by students and faculty members. Meeting rooms, a ballroom, Boll Theatre, and University vans are available for use and can be reserved by calling 229-3333 (Kennedy Union Room 241). Information about student organizations
can also be found at go.udayton.edu/slku or by calling 937-229-3333 (Kennedy Union Room 241).

The John F. Kennedy Memorial Union, centrally located on the campus, offers comfortable surroundings and a variety of services for the University community. Lounges provide space for discussion, studying, and socializing. The Hangar games room on the ground-floor includes bowling lanes, pool tables, lounge space, a cafe, and video games. The ground-floor food court includes a full-service deli, pizza, southwest cuisine, daily specials, grill favorites, and desserts. Automatic teller machines, display cases, and vending machines are housed in the Union, as are student offices for the Campus Activities Board, Christmas on Campus, Daytonian Yearbook, Flyer News, Flyer TV, Orpheus literary magazine, Student Government Association, and a lounge for commuter students. Also in the union are the Information Center, Box Office, KU Dining Services, Catering Services, and the travel agency.

Student Life and Kennedy Union is responsible for registering all student organization-sponsored events, granting recognition to all student organizations, providing assistance for organization advisers, publicity approval, programming the Flyer TV information channel, and coordinating campus-wide events. The office works directly with commuter students, Student Government Association, IFC, NPC, NPHC, Flyer News, Flyer Radio, Daytonian Yearbook, Orpheus, Campus Activities Board, the Charity Concert Committee, Christmas on Campus, and all recognized student organizations.

## Office of Community Standards and Civility

The Office of Community Standards and Civility administers the policies of the University of Dayton. Our primary focus is on helping students learn from the consequences of their actions and become a positive influence within the University of Dayton community and beyond.

The Standards of Behavior that guide our life together are:
Support of the Academic Community and the Development of the Whole Person

All students at the University of Dayton are expected to live and work in support of our academic mission and of the Marianist tradition of Catholic education, which is committed to the holistic formation of spirit, mind and body.

## Community Living

Living in community is essential to the full development and education of the whole person. Building and sustaining the community we all treasure at the University of Dayton requires more than friendliness and is certainly about more than following rules. All students learn and apply essential life lessons about self-awareness, communication, cooperation, mutual respect, courage, forgiveness, patience and trust while living in community with others.

## Dignity and Respect for All Members of the Community

Every person has innate dignity as all are made in the image and likeness of God. This understanding calls all members of the UD community to respect and love themselves and others.

## The Common Good

The common good at the University of Dayton is defined as the sum total of social conditions which allow people, either as groups or individuals, to reach their fulfillment more fully and more easily. A concern for the common good leads us to make individual choices in light of how they affect, or may affect, other people and the community as a whole. Students are called to work actively to create and promote the common good at UD and beyond.

Visit the Community Standards and Civility web site to read about our Standards of Behavior in greater detail and to learn more about this department.

## Office of Multicultural Affairs

The University of Dayton is committed to creating an environment that celebrates cultural diversity while focusing on the Marianist philosophy of service, leadership, and community. The Office of Multicultural Affairs, in the division of Student Development, provides facilities and services to support the academic achievement of multicultural students and assists in enhancing the understanding that all UD students have of themselves and others through co-curricular experiences. Staff members in the Office of Multicultural Affairs collaborate with campus and community partners to provide a nurturing community that promotes academic success.

## Office of Student Learning Services

The Ryan C. Harris Learning Teaching Center (LTC) Office of Student Learning Services (SLS) is Your Partner in Learning. We offer a wide variety of services to assist all students in achieving academic success at the university.

## Academic Coaching

Professional staff meet individually with students to:

- Discuss your academic goals
- Help motivate you toward success
- Provide information about a variety of study skills


## Academic Renewal Course \& Coaching Program-ARCC

- A one-credit, seven-week course offered every semester for any student who wants to learn more about how to be successful at UD or who may be struggling academically
- Focus on self-assessment and academic success planning
- Individual coaching sessions with the instructor through the end of the semester
- Limited seats available each semester by permission of SLS staff


## Walk-In Tutoring

- Free tutoring and study groups available in selected general education courses
- Conducted by undergraduates who receive on-going training \& supervision
- Hours and days vary by class. For specifics, click here (http:// learningservices.udayton.edu/tutor/schedule.html).


## Faculty and Staff Consultation

- Presentations and workshops covering topics related to learning and teaching for faculty and staff
- Assistance with implementation of learning, teaching, and student support strategies
- Individual consultation about academic needs of students with and without disabilities

Fully Integrated Resource, Support, and Transition Program- FIRST

- College transition program offered to students selected by the Office of Admissions
- A total package of academic support integrated into your regular schedule of courses
- Anchored by a 2 credit hour course, The Art \& Science of Learning (UDI 175), in the fall semester
- For more information, visit the FIRST website (http:// learningsupport.udayton.edu/first).


## Online Resources

- Links to materials for use in class or individually by students: study tips and self-assessments
- GPA calculator
- Time management downloads including planners and schedules


## Services for Students with Disabilities

- Individual consultation about disabilities and how best to coordinate accommodations
- Academic and testing accommodations for qualified students with disabilities
- On-going disability management advising
- Assistive technology evaluation and training
- Alternative format production
* For more information, see the Students with Disabilities section.


## Supplemental Instruction- SI

- Group meetings with a student leader in addition to class.
- Assists you in mastering course material through discussion and hands-on activities


## Student Consultations

- Regarding any academic issues in single or multiple sessions
- Referrals to campus and community resources
- Disability screenings


## Workshops by Request

- Topics related to learning, teaching and support for student learning
- Stand-alone or series workshops


## Write Place

- Offered by the LTC Office of Writing, Research \& New Media
- Free peer-to-peer writing support for students
- Free Digital Drop-Off service for feedback at any stage of the writing process
- Afternoon and evening hours


## Office of Student Learning Services: Students with Disabilities

The University of Dayton is committed to including all university students with disabilities as full participants in its programs, services and activities. The University complies with Section 503 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (ADAAA) of 2008.

Services for students with disabilities at the University of Dayton are provided through the Ryan C. Harris Learning Teaching Center (LTC) Office of Student Learning Services (SLS). SLS strives to ensure that students with disabilities have equitable access to opportunities at the University of Dayton so they can participate freely and actively in all facets of university life. SLS provides access to programs and services through academic, housing and testing accommodations; individual consultations; on-going disability management; and production of alternative format course materials. For students with disabilities, SLS:

- Encourages the development of self-advocacy and self-determination skills.
- Assists in the interactive process between students and faculty for determining and implementing reasonable accommodations.
- Ensures access to university programs and services through reasonable accommodations to students with disabilities registered with SLS. SLS does not provide special, structured programs specifically for students with disabilities.
- Assists the university community in understanding the concept and the realities of disability and in working to eliminate barriers that limit the opportunities for students with disabilities at the University of Dayton.
- Assists the university in complying with the provisions of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Acts (ADAAA) of 2008.


## The Academic Accommodation Process

Students with disabilities are entitled to reasonable accommodations from the University of Dayton. At the post-secondary level, reasonable accommodations cannot fundamentally alter the essential functions of a course, program or service. Students asking for classroom or testing accommodations may request a Self-Identification Letter from SLS to be used as an aid in discussion of accommodations with their professors. This letter identifies recommendations for reasonable accommodations based upon consultation between the student and SLS staff to determine specific, individual needs. Since all students are ultimately responsible for their own academic achievement, the decision of whether to use recommended accommodations is the student's responsibility.

## Roles and Responsibilities of Students, Faculty, and SLS Staff

Students have the right to:

- Freedom from discrimination based on their disability.
- Confidentiality of information in keeping with University policy and federal law unless otherwise requested by the student in writing.
- Equitable access to programs and services offered at the University of Dayton.
- Timely and effective implementation of reasonable accommodations.
- Support from SLS when the student has requested reasonable accommodations from a professor or staff member in a timely manner but the accommodations have not been implemented.
- File an appeal or grievance with the University of Dayton Office of Legal Affairs.

Faculty have the right to:

- Uphold the policies in the University of Dayton Student Handbook and/or academic regulations.
- Expect that all enrolled students are academically qualified and will be held to established academic and behavior standards.
- Request that a student present a current Self-Identification Letter issued by SLS.
- Consult with SLS staff regarding any concern with a student's request for reasonable accommodations or with SLS recommendations.
- Deny accommodations that are not requested in a timely fashion as outlined in published SLS guidelines.

Students have the responsibility to:

- Meet with their professors in a timely manner to discuss their request for reasonable accommodations and how those accommodations will be implemented.
- Provide professors with a copy of their current SLS Self-Identification Letter, if requested.
- Provide adequate notice for accommodation requests as outlined in published SLS guidelines.
- Fully participate with faculty, staff and SLS in the interactive process for determining and implementing reasonable accommodations.
- Use reasonable accommodations appropriately.
- Adhere to institutional standards of conduct as outlined in the "Student Standards of Behavior" published by the Office of Community Standards \& Civility (http://www.udayton.edu/studev/ civility).

Faculty have the responsibility to:

- Include a statement regarding accommodations in their course syllabus and bring this statement to the attention of students in the first class meeting of the semester. A suggested syllabus statement can be found on the SLS website under Faculty Resources.
- Evaluate students based on performance and ability, not on perception of disability or use of accommodations.
- Discuss the student's accommodation requests with the student. The professor may choose to ask the student to bring a current SLS SelfIdentification Letter as an aid in this discussion.
- Contact SLS staff at 937.229.2066 (TTY 937.229.2059) if there are any concerns after meeting with the student about reasonable accommodations. Students are entitled to SLS-recommended reasonable accommodations until concerns are resolved.
- Refer students to SLS if a student brings disability documentation directly to faculty. Disability documentation should not be reviewed or kept by faculty.
- Refer students to SLS who express disability related concerns or who are struggling academically.

SLS has the responsibility to:

- Determine eligibility of a student with a disability based on appropriate disability documentation provided by a qualified professional.
- Ensure reasonable accommodations to qualified students with disabilities.
- Determine reasonable accommodations with the student and with other University officials, when necessary.
- Assist the University in complying with the provisions of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (ADAAA) of 2008.
- Encourage the development of students' self-advocacy and selfdetermination skills.
- Provide confidentiality of student records according to FERPA regulations and other relevant statutes.
- Assist the university community in understanding the concept and the realities of disability and in working to eliminate barriers that limit the range of opportunities for students with disabilities at the university.
- Provide information regarding policies and procedures to students with disabilities in a timely manner and assure its availability in accessible formats upon request.


## Registration with SLS

To register with SLS, please provide disability documentation from a qualified professional that substantiates a disability under Section 504 of the Rehabilitation Act of 1973 or Title III of the Americans with Disabilities Act of 1990 or the ADA Amendments Act of 2008. Visit the SLS website for more information on documentation guidelines.

Preferred format for delivery of disability documentation is via email attachment in pdf format to disabilityservices@udayton.edu. Please make sure the subject line of the email contains the student's full name and first year of enrollment at the University of Dayton.

Please contact SLS for assistance with submission with other delivery options.

Phone: 937.229.2066 TTY 937.229.2059
Email: disabilityservices@udayton.edu
University of Dayton
Office of Student Learning Services
Attn: Disability Services
300 College Park
Dayton, OH 45469-1302
Fax Number: (937) 229-3270

## Privacy Rights of Parents and Students

In compliance with Section 438 of the General Education Provisions Act, the University of Dayton has published regulations designed to protect the privacy of parents and students as to the access and to the release of records maintained by the institution.

## Public Safety

The Department of Public Safety seeks to provide a safe and secure environment for the entire University of Dayton community, which includes the students, faculty, staff, and visitors. The department provides police, parking, and emergency medical services to the U.D. campus
community. The Student Cadet program is also operated by Public Safety. Public Safety offices are located on the ground floor of College Park Center at 1529 Brown St.

## Police

Police operations include enforcement of laws and campus regulations, criminal investigation, crime prevention, and providing for the physical security of University of Dayton property and interests. The department has primary jurisdiction for law enforcement and criminal investigation on all University of Dayton owned or controlled property, and all public property within the defined campus boundaries according to the mutual aid agreement with the City of Dayton Police Department. Police officers are all graduates of the Basic Police Academy and are sworn law enforcement officers, the same as their municipal counterparts. All full time police officers are required to maintain certification to provide emergency medical services to the campus community.

Emergency assistance is available 24 hours per day, seven days a week. Call 911 in the event of an emergency, or 229-2121 for all other assistance. (Non UD Network Phones will call the City of Dayton Police \& Fire Departments when dialing 911.)

## Parking Services

Parking Services is responsible for management of the University's more than 5,500 parking spaces located in over 50 parking lots, and with enforcement of parking regulations. Lots are patrolled daily by Parking Services Representatives, who issue citations to violators. The following information applies to student parking.

- Campus parking facilities are extremely limited. We recommend you determine parking availability before bringing a vehicle to campus, as on street parking is also severely restricted in the vicinity of campus.
- All vehicles parked on University of Dayton property must have a valid parking permit displayed, except during open parking hours.
- First-Year residential students will NOT be permitted to bring vehicles to campus.
- Graduate/law students and graduate assistants will be sold student parking permits.
- Commuting students will be sold permits for Lot S1.
- Students living in landlord housing within one mile of campus will be sold resident student permits.
- Resident student parking priority will be given to upper class students with the highest priority being given to students with disabilities, internships, co-op, or senior education majors.
- Information concerning permit sales will be disseminated to students annually.
- All students are required to apply online through the parking website (http://www.udayton.edu/~safety/parking).
- Evening students are sold N (night) permits, which are valid in Lot B at $4: 15$ p.m., Lots A, C, P, and S1 at 4:00 p.m. and anytime during weekends in any campus parking lot except those marked with a double letter. N (night) permits will be honored in Lot S1 anytime during the summer sessions.
- Students may contact Parking Services at (937) 229-2128, M-F 8:00 a.m.-4:30 p.m. or at parking@udayton.edu (parking@notes.udayton.edu).


## Rescue Squad

The Department of Public Safety also provides around the clock emergency medical services, primarily through the support of the

University of Dayton Student Volunteer Rescue Squad. The Student Volunteer Rescue Squad is comprised of full-time undergraduate students who receive their training and equipment from the Department of Public Safety. All UD Student Rescue Squad members are nationally registered EMT-Bs and volunteer their time to serve the community.

## Student Cadet Program

The Student Cadet Program consists of part-time student employees who operate the Student Escort Service through the Department of Public Safety. The Student Escort Service is a program that provides free transportation for students within the campus community with a focus on crime prevention.

## Residential Living

The University of Dayton maintains a limited number of diverse housing units for graduate students. There are approximately 64 spaces for firstyear law students in University housing. Housing needs of upper-class law and graduate students also may be accommodated on a spaceavailable basis. Graduate and law students interested in University housing should contact Residence Life at 937-229-3317 upon their acceptance.

Students are advised to coordinate their housing arrangements as early as possible. If University housing is not available, information can be provided regarding private housing in the Dayton area.

## Student Handbook

Each student at the University of Dayton is responsible for knowing and observing the policies, regulations, and procedures contained in the official student handbook. This publication also provides useful information on such subjects as University services, student organizations, and resource numbers.

The entire Student Handbook is available here (http://www.udayton.edu/ studev/_resources/files/civility/student_handbook_2012_2013.pdf).

All Student Handbook information provided on the website may be printed from personal computers and printers.

The "University of Dayton Student Standards of Behavior" section of the the Student Handbook is printed in booklet form and distributed to all residents of UD owned housing facilities. The handbook is also available at the Kennedy Union Information Desk for students living in other residences.

Changes in disciplinary policies and procedures made during an academic year will be announced to the student population via campus email. Informing students of policy and procedure changes via campus email is considered official notification. The website version of the Student Handbook will be updated upon implementation of said change.

## Student Life and Kennedy Union

A variety of cultural, educational, social, and recreational activities are presented in the Union regularly to enrich and enhance academic life and foster a spirit of community. In addition, this office provides support, direction, and programming opportunities for students and officially recognized student organizations. Activities include theatrical productions, lectures, dance ensembles, and recitals and concerts by students and faculty members. Meeting rooms, a ballroom, Boll Theatre, and University vans are available for use and can be reserved
by calling 229-3333 (Kennedy Union Room 241). Information about student organizations can also be found at 229-3333 (Kennedy Union Room 241).

The John F. Kennedy Memorial Union, centrally located on the campus, offers comfortable surroundings and a variety of services for the University community.

- Lounges provide space for discussion, studying, and socializing.
- The Hanger games room on the ground-floor includes:
- Bowling lanes
- Pool tables
- Lounge space
- A cafe
- Video game
- The ground-floor food court includes:
- A full-service deli
- Pizza
- Southwest cuisine
- Daily specials
- Grill favorites
- Desserts
- The Union offers:
- Automatic teller machines
- Display cases
- Vending machines
- As are student offices for:
- The Campus Activities Board
- Christmas on Campus
- Daytonian Yearbook
- Flyer News
- Flyer TV
- Orpheus literary magazine
- Student Government Association
- A lounge for commuter students
- Information Center
- Box Office
- Leadership Development Office
- KU Dining Services
- Catering Services
- Travel agency

Student Life and Kennedy Union is responsible for:

- Registering all student organization-sponsored events
- Granting recognition to all student organizations
- Providing assistance for organization advisors
- Publicity approval
- Programming the Flyer TV information channel
- Coordinating campus-wide events

The office works directly with:

- Commuter students
- Flyer News
- Flyer Radio
- Daytonian
- Orpheus
- Campus Activities Board
- Christmas on Campus
- All recognized student organizations


## Women's Center

The Women's Center at the University of Dayton (937-229-5390) is an educational space which serves to enhance the climate for women and men on campus. Located on the second floor of Alumni Hall, the Center, which includes a Resource Center, gallery space, and several reservable rooms, advances the full and active participation of women students, staff and faculty who learn and work at the University of Dayton, while promoting campus and community conversations on the role of women in society and the world. The Center accomplishes this mission by facilitating and coordinating programs and initiatives which: promote the physical and psychological well being of women through education, support services and referral; provide an ongoing assessment of the campus climate for women; promote the active and full participation of UD women through service, education, mentoring, networking, and advocacy; inculcate leadership skills; address gender-related topics; provide information to the campus community on women's issues; provide a place to build a community of scholarship to advance research on women and gender; create a welcoming and safe space for persons of different racial, social, gender, religious, and cultural backgrounds; cal women and men of all faiths to explore and incorporate faith-based living into their everyday lives. Connected, distinctive, and community-building, the UD Women's Center strives to promote equality, understanding, and mutual respect and to foster a strong educational community in which women and men are supported, challenged, and prepared to learn, lead, and serve. For more information on the UD Women's Center, visit http:// womenscenter.udayton.edu.

## Admission-Undergraduate

We might not be able to make it easier for you to make your college decision, but at least we'll make it easier for you to apply. All it takes to apply is a simple click.

Applications for admission to the University of Dayton are reviewed for specific academic majors or, when applicable, for undeclared status in an academic division. The admission committee reviews grade record and pattern throughout high school, selection of courses in preparation for college, class standing or ranking (if provided by the high school), and ACT or SAT scores. The admission committee also considers the recommendation of a high school guidance counselor, along with other factors. The University of Dayton strives to admits students who possess the intellectual ability, the commitment to community, and the motivation to thrive at the University of Dayton.

In this section:

- Application for Admission (p. 28)
- Advanced Standing by Examination (p. 28)
- Considerations for Admission (p. 29)
- High School Scholars (p. 30)
- International Students (p. 31)
- Programs for Select At Risk Students (p. 31)
- Transfer Students (p. 31)
- Veterans (p. 32)


## Advanced Standing by Examination

## Advanced Placement (AP)

The University participates in the College Board's AP program, which allows students to receive college-level course credit for knowledge achieved through prior experience. AP examinations are given in May, upon completion of college-level material. Students who wish to receive credit and advanced placement through the AP program should have test scores sent to the University of Dayton. Advanced standing with credit in appropriate subject areas is awarded as follows:

- For a score of 5 - one or two terms of advanced standing with credit, depending on subject area
- For a score of 4 - one term of advanced standing with credit
- For a score of 3 - one term of advanced standing with credit is awarded in the following: computer science, environmental science, French, German, physics, psychology, Spanish, and statistics

Scores below 3 do not entitle the applicant to either credit or advanced standing.

## College Level Examination Program (CLEP)

The University of Dayton also participates in the College Level Examination Program (CLEP), sponsored by the College Board. CLEP offers examinations in specific subjects. Since not all subject examinations are acceptable and some subject examinations require an essay, please contact Testing Services at the University of Dayton at (937) 229-3277 for information

## General Certificate of Education A-Level Examinations

GCE A-Level examinations are based on a British secondary school program of college-level work and standardized examinations. To receive credit submit official test results to the Office of the Dean. A-Level examinations with a grade of "E" or better will be considered for credit.

## International Baccalaureate

The IB Programme is a rigorous preuniversity course of studies leading to examinations. Each examined subject is graded on a scale of one (minimum) to seven (maximum). Diploma candidates are required to select one subject from each of the six available groups. At least three and not more than four subjects are taken at higher level while others are taken at standard level.

IB is administered through the Office of the Dean in the College of Arts and Sciences. Based on results of IB higher level examinations, students may receive transfer credit. Credit is not awarded for standard level examinations.

## Application for Admission

Applications for first-year admission should be submitted to the Office of Admission and Financial Aid through the University of Dayton's online application or the Common Application. The paper application has a $\$ 50$ application fee. This $\$ 50$ fee is waived if the electronic version of the Common Application or the University's application is submitted. Students are encouraged to submit applications early in their senior year
of high school. The University of Dayton has an early action deadline of December 15 and a regular decision deadline of March 1.

Along with the application (including the essay), the applicant must submit an official transcript of courses and grades in secondary school, official results of the ACT or SAT, and the counselor recommendation form.

Any person whose native language is not English must submit an acceptable score on:

- The Test of English as a Foreign Language (TOEFL)
- The English Language Proficiency Test (ELPT)


## Considerations for Admission

The applicant must have graduated from a high school accredited by a regional accrediting agency, a state department of education, or the equivalent, and have a total record indicating a likelihood of success at the University of Dayton. The General Education Development (GED) certificate is also recognized for consideration by the admission committee.

The quality of the academic record is shown by the applicant's grades, selection of courses, and class standing or ranking. Although no set pattern of courses is required for admission, a well-prepared candidate will have had from 15 to 18 units in English, social sciences, mathematics, foreign language and laboratory science. Those who plan to major in one of the natural sciences, mathematics, computer science, business administration or engineering will find a strong mathematics background helpful.

Additional indicators of academic aptitude are scores received on the ACT, SAT, and, when applicable, the Test of English as a Foreign Language (TOEFL). The recommendation of the high school guidance counselor concerning ability, motivation, and character is reviewed by the admission committee.

Each applicant is strongly encouraged to visit campus and talk with an admission counselor. A visit also will provide an opportunity to see campus and ask questions of students and faculty.



## High School Scholars

The University of Dayton participates in the program established by Ohio Senate Bill 140, which allows high school juniors and seniors to enroll in college courses while still enrolled in high school, provided
space is available. This program is also known as the Post-Secondary Enrollment Options program. It is selective and limited to a specific number of students. Interested students must submit a High School Scholars Program application, available in the Office of Admission or in Dayton-area high school guidance offices in the Dayton area. A PDF
version of the application is also available on the admission website (catalog.udayton.edu/undergraduate/generalinformation/admission/ highschoolscholars/\%20http://www.udayton.edu/apply/pseo.php).

## International Students

## Academic Programs

International students applying for an undergraduate program should submit the online Application for Undergraduate Admission and Scholarship or the Common Application and follow the general admission procedure outlined in the application instructions. The paper application has a $\$ 50$ application fee. This $\$ 50$ fee is waived if the electronic version of the Common Application or the University's application is submitted. The applicant whose native language is not English must demonstrate:

- A score of 523 (paper-based), or 70 (Internet-based) on the Test of English as a Foreign Language (TOEFL),
- A minimum score of 956 on the English Language Proficiency Test (ELPT),
- A minimum score of three (3) on the Advanced Placement International English Language (APIEL) Examination, or
- A minimum Band 6 score on the International English Language Testing System (IELTS) may be submitted in lieu of the TOEFL.

Undergraduate applicants unable to demonstrate the required TOEFL score or the equivalent for their level of study at the time of application may be considered for conditional admission. Such a student will be expected to attend the University of Dayton's Intensive English Program and successfully complete the program or obtain the required TOEFL score for their level of study before full admission to an academic program will be granted.

For all students applying to an academic program, an official copy of the student's complete academic record of all previously attended secondary schools, colleges or universities must be received. This record must include dates of attendance, all subjects studied, grades earned and marks achieved on examinations. These documents must be accompanied by a certified English translation if the documents are not in English. Documents must be sent directly from the institution to the University.

## Intensive English Program

Students wishing to study English as a second language may enroll in the University's Intensive English Program. Students may apply for admission to the Intensive English Program only or they may apply for conditional admission to an academic program at the University of Dayton. If a student seeking conditional admission completes an application to an academic program, a separate application for the Intensive English Program is not required.

Applicants to any of the above University programs requiring a student visa must present a letter of financial support and an original bank statement showing sufficient funds to cover the first year of study.

## Programs for Select At-Risk Students

The University has planned academic support programs, subject to availability, for a limited number of students who are judged to need special support to be successful at the University of Dayton.

The Fully Integrated Resource, Support and Transition (FIRST) Program is offered to a limited number of students whose academic profile and experience suggest that they will benefit from a structured transition to college. In accepting admission to the University, FIRST students and their parents sign a contract indicating their understanding of the expectations for participants in the program. FIRST students are enrolled in a course during the fall semester, which is designed to engage students in discussion and activities that will enhance their learning and study skills. In addition, FIRST students are expected to attend learning support sessions offered for several courses during the first semester.

The University Special Admits Program serves entering first-year students who are capable of academic success but, due to deficiencies in their academic background, need additional support to realize their full potential. Each year the Office of Admission and Financial Aid, in collaboration with each academic division (College of Arts and Sciences, Schools of Business Administration, Education and Health Sciences, and Engineering), sets guidelines for accepting a limited number of first-year undergraduates as Special Admit students. Each academic division has developed support programs to help Special Admit students succeed in college. Depending on the academic division, the Special Admits Program may include careful course placement, special advising, supplemental instruction in designated courses, study tables, math workshops, and cohort formation. Contact the Office of Admission and Financial Aid for specific information about the Special Admits Program in each academic division.

## Transfer Students

Students from accredited institutions may be considered for transfer to the University of Dayton provided they are in good standing socially and academically (minimum of a C average- 2.0 cumulative grade point average). Possession of the minimum grade point average for consideration does not imply admissibility to the University. Most areas of study prefer a 2.5 or higher grade point average for admission.

Transfer students will be considered for admission after they have followed the regular admission procedure. Applicants for transfer admission may submit the University of Dayton's online application or the Common Application. ACT or SAT scores are required of transfer applicants under 21 years of age. All students applying to the School of Education and Health Sciences, are required to submit ACT, SAT, or Praxis I scores. All transfer candidates must submit official transcripts from all institutions previously attended. The dean's office of the appropriate college or school will evaluate the transcript(s) to determine the number of transferable credits. In general, all college credits earned with a "C" ( 2.0 on a 4.0 scale) or higher from any regionally accredited college or university will transfer and be included on the University of Dayton transcript. No credit will be given for a course in which the student earned below a "C". The evaluation to determine which courses will be accepted toward the degree will also be completed by the dean's office of the appropriate college or school.

A student with transfer credit from a two-year institution will be required to have at least 54 semester hours from a four-year institution for any baccalaureate degree. A transfer student is considered for a degree only if the last 30 semester hours have been taken from the University of Dayton and other requirements for graduation have been met.

## Veteran Services Office

All departments at the University have been approved by the State Approving Agency for Veterans' Training. Please contact the Veterans Services Office to inquire as to whether your major is listed among those approved by the State Approving Agency. The Veteran Services Office is located in St. Mary's Hall, room 411, and will assist in processing the necessary forms for educational benefits. A student who is receiving V.A. benefits is required to complete and sign all required forms, which can be obtained through the University's Veteran Veteran Services Office. Students using veteran benefits must inform the Veteran Services Office of any changes made to major, enrollment, and registration. Failure to follow this procedure may result in cancellation of benefits by the V.A. For the conditions for good academic standing, visit Academic Standing under the Academic Information in the General Information section of the Catalog. If a student on probation fails to acquire the required cumulative grade point average at the end of the veteran's next full-time term, the benefits from the V.A. may cease.

## Financial InformationUndergraduate

A University of Dayton education is a lifetime investment, appreciating over the course of time. It's also an excellent value, and more than 90 percent of undergraduates receive financial assistance. Find out how more than 7,300 undergrads are making their UD dream a reality.

In this section:

- Academic Scholarships for First Year Students (p. 32)
- Academic Scholarships for Returning Students (p. 32)
- Additional Opportunities (p. 32)
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## Academic Scholarships for FirstYear Students

Merit based scholarships have been established to recognize academic achievement for our incoming first-year students. Applicants receive consideration for these scholarships based on the following:

- high school academic performance
- SAT or ACT scores
- demonstrated service to school, community and church
- proven leadership ability
- citizenship

Awards begin at $\$ 1,000$, and each scholarship is renewable for eight undergraduate terms. To remain eligible for these scholarships, recipients must maintain the required minimum cumulative grade point average, be enrolled full time (minimum of 12 credit hours), participate in Universitysponsored extracurricular activities, and serve as a responsible member of the university community.

Application Procedure

1. Apply for admission to the University of Dayton by December 15th of your senior year in high school. Apply online at the University homepage.
2. Take the Scholastic Aptitude Test (SAT) and/or the American College Test (ACT) no later than December. Indicate that your scores are to be sent to the University of Dayton.

## Academic Scholarships for Returning Students

Students in full-time attendance who have completed at least 12 semester hours on campus at the University of Dayton will be considered for additional scholarships. Recipients are selected on the basis of academic accomplishments, leadership, financial need, and demonstrated service to the University. These scholarships are gifts to the University of Dayton, from alumni, families, corporations, and foundations. The scholarships are awarded for a period of one academic year and generally range from $\$ 500$ to $\$ 3,000$.

## Additional Opportunities

## Veteran Benefits

Students who enlisted in the military as Active Duty or as Selected Reserve Status may qualify for the Montgomery G.I. Bill benefits. Students of a parent who is/was a military veteran may qualify for Educational Assistance Benefits.
For additional information, visit www.gibill.va.gov (http:// www.gibill.va.gov).

## Vocational Rehabilitation

State vocational rehabilitation agencies arrange the training of disabled persons for gainful employment. Requests for information on rehabilitation services should be directed to the State Director, Vocational Rehabilitation Agency.

## U.S. Army Reserve Officers Training Corps (ROTC)

Army ROTC has a number of scholarships available, affording students the opportunity to defray a majority of the costs of attending a prestigious school such as the University of Dayton. High school students compete for three- and four-year scholarships. These scholarships currently are valued at full-tuition, plus University incentive grants. Two- and threeyear scholarships may be available once a student is enrolled at the University. Currently, these scholarships will pay tuition. In addition, students receive an allowance of $\$ 3,000$ to $\$ 5,000$ each school year the scholarship is in effect.

## U.S. Air Force Reserve Officers Training Corps (AFROTC)

The Air Force Reserve Officers Training Corps (AFROTC) program is offered in cooperation with Wright State University by the Department of Aerospace Studies. All students who complete the General Military Course (freshman and sophomore years) may have the opportunity to enroll in the advanced Professional Military Course (junior and senior years), leading to a commission in the United States Air Force upon graduation. There are opportunities throughout the program to compete for scholarships and stipend money. Refer to the Air Force Reserve Officers Training Corps (AFROTC).

## Ohio National Guard Scholarship

- NOT based on financial need
- Available to Ohio residents enlisted in the Ohio National Guard
- Apply by contacting your local National Guard recruiter or call 1-888-400-6484


## Ohio Safety Officers Memorial Fund

- NOT based on financial need
- Available to children of Ohio Peace Officers or Ohio Firefighters killed in the line of duty
- Apply by contacting the Ohio Board of Regents


## Ohio War Orphans Scholarship

- Available to children of deceased/disabled Ohio war veterans
- Apply by contacting the Ohio Board or Regents
- Deadline July 1


## Cancellation and Refunds

If registration is cancelled before the first day of classes, full tuition refunds will be made with the exception of the admission deposit. Housing refunds will be made in accordance with the terms of the "Student Housing Contract".

Cancellations will be allowed only after the completion of proper drop/ add procedures. Students who do not attend classes and do not officially complete withdrawal procedures during the cancellation period will be responsible for the full amount of the applicable tuition and charges.

Detailed housing cancellation information can be found at the Residential Services website at housing.udayton.edu.

During the four-week cancellation period for the first and second terms, tuition credits will be given according to the following schedule:

- During first week of classes $80 \%$
- During second week of classes $60 \%$
- During third week of classes $40 \%$
- During fourth week of classes $25 \%$
- During or after fifth week of classes $0 \%$
(The 1st week starts on the first day of a term; the 2nd week begins 7 days later, etc.)

During the two-week cancellation period for each six-week session of the split third term, tuition credits will be given according to the following schedule:

- During first week of classes $65 \%$
- During second week of classes $30 \%$
- During or after third week of classes $0 \%$

Cancellations for a full third term course have a four-week cancellation period and will be on the same schedule as cancellations for the first and second terms.

Financial adjustments for tuition are based on the date the drop (withdrawal) form is finalized in registration.

Financial adjustments for housing (please refer to your housing contract) are based on the date of checkout from housing, if applicable.

Special rules may apply for students who withdraw and who received Title IV funds. Please contact the Office of Financial Aid if additional information is needed.

All tuition refund requests and appeals must be in writing and directed to the Director of Student Accounts/Bursar.

Students suspended/dismissed from the University or from University residence facilities as a result of disciplinary action are not eligible for any refund of tuition, room or board charges under the University's Cancellation and Refund policy. Exceptions to this position will be made to comply with refund requirements of federal financial aid programs.

## Dining Services

The University of Dayton Dining Services operates two full-service a la carte student dining facilities located in Kennedy Union, and Marycrest Complex, and two restaurants. Passports and The Grainary, located in the V.W. Kettering Residence Hall. The Emporium, a mini grocery store with a full service deli, is located in the Marianist Residence Hall, and Stuart's Landing, a convenience store, is located in Stuart Hall Complex. Dining Services also operates The Galley, a pretzel/ ice cream/ gourmet coffee shop located in Kennedy Union, and The Chill, a juice bar with healthy snack options, located in The RecPlex. All students living in Marycrest, Stuart, Founders, Marianist, and Virginia Kettering Residence Halls are required to purchase a meal plan. Meal plan options are as follows:

- Standard Plan - This structured meal plan has a spending allowance associated with it during specific meal periods. If you don't spend the entire allowance for that meal, you lost it. This plan starts with breakfast the first day of classes.
Note: Only one block of funds may be used during each meal period. For example, two blocks may not be used during the lunch meal period on the same day.
- The Flexible Plan- This is a debit style meal plan and provides complete flexibility, with no specific meal periods and no spending allowances.
Note: There are no refunds on debit plan balances however, $100 \%$ of balances remaining at the end of fall semester will roll over to the spring semester. At the end of spring semester $50 \%$ up to a maximum of $\$ 300$ will roll over to the next school year.

All students living in residence halls must have one of the following:

- Standard Plan (3 blocks per day, 7 days) $\$ 2,300.00$ semester
- Flexible Plan (debit account) $\$ 2,300.00$ / semester

For complete information on meal plans, please visit http:// dining.udayton.edu

When a student does not choose a meal plan the default plan is the Flexible Plan.

Non-resident students may purchase a Neighborhood meal plan (debit account).

## Employment

The Federal Work-Study Program (Federally supported) provides work opportunities for full-time students who demonstrate financial need. While most work opportunities are on campus, employment is also available in local agencies and area elementary schools through the Federal Work Study Community Service Program.

University-Funded Employment (University supported) opportunities for students who do not qualify for the Federal Work-Study Program are also available.

Federal Work-Study and University-Funded student workers may work up to 20 hours per week during the school term and will receive payroll checks semi-monthly for their services. Students interested in pursuing opportunities in either of these programs should apply online at jobs.udayton.edu.

## Expenses

Tuition for full-time students during the 2013-14 academic year (fall and spring terms) will total about $\$ 35,800$. Room and board on campus for this period would be approximately $\$ 11,990$ based on double room occupancy, Flexible Meal Plan, and a Flyer Express account for weekends. Books and supplies will cost approximately $\$ 500.00$ each term. In addition, the student will need funds to satisfy personal expenses and extra meals on the weekends.

Expenses for commuting students will include tuition and miscellaneous living costs. Transportation to and from the University as well as meals should be considered in the budget.

## Financial Aid Policy

The University of Dayton realizes that many students need assistance financing their college education. Financial aid is available in the form of nonrepayable grants, scholarships, student loans, and part-time employment. Parent loans and monthly payment plans are also available. Priority is given to our full-time, degree-seeking students.

Students seeking financial assistance must complete the Free Application for Federal Student Aid (FAFSA) annually. Developed by the U.S. Department of Education, the FAFSA is used to determine the family's financial need after careful review of income, assets, and other houshold information. Eligibility for need-based federal, state, and universitysponsored aid is determined by comparing the total cost of attending UD with a family's available resources - as determined by the FAFSA.

The FAFSA should be submitted electronically each year (www.fafsa.gov) by March 1 to ensure that the University of Dayton receives the results by the priority deadline date of May 1. UD's federal code is 003127.

In order to submit the FAFSA electronically, the applicant (student) and at least one parent (if deemed dependent a dependent student by FAFSA definition) must possess a federal student aid PIN number. To apply for an FSA PIN, the appropriate parties should visit www.pin.ed.gov. Students are encouraged to call the Flyers First Office or Financial Aid
or meet with a Flyers First Counselor if they have questions regarding financial aid.

## General Policy

The tuition and charges of the University are set at the minimum permissible for financially responsible operation, and in general these charges are less than the actual costs incurred. Gifts and grants received through the generosity of industry, friends, and alumni help to bridge the difference between income and costs. The trustees of the University reserve the right to change the regulations concerning the adjustment of tuition and charges at any time the need arises and to make whatever changes in the curricula they may deem advisable.

Tuition, charges, room and board are to be paid in full before the term begins or in accordance with payment terms for the fall and spring semesters. Late registration charges are assessed when scheduling and registration are completed after the start of the term.

All checks should be made payable to the UNIVERSITY OF DAYTON. The student's name and student identification number should be shown on the face of each check to insure proper credit.

An assessment of $\$ 25.00+1 \%$ of the check amount will be made for payment of tuition and charges by a bad check or for any other returned check from any area at the University. This assessment is made each time a check is dishonored.

Registration for a new term, transcripts of credit, and honors of graduation may be permitted only for students whose financial University records are clear.

## Grants

## Federal Pell Grant

The Pell Grant Program makes funds available to eligible undergraduate students who demonstrate high financial need. Apply by completing the Free Application for Federal Student Aid (FAFSA).

## Federal Supplemental Educational Opportunity Grants

These federally supported, university-administered grants are provided to undergraduate students who have high financial need.

## University Need Based Grant

The University of Dayton offers nonrepayable grants to undergraduate students with demonstrated financial need. The University assumes that the student will also accept self-help aid in the form of loans and schoolyear employment. A University Need Based Grant is intended to cover a portion of financial need. The Free Application for Federal Student Aid (FAFSA) is required annually for consideration.

## Federal TEACH Grant

The Teacher Education Assistance for College and Higher Education (TEACH) Grant Program provides up to $\$ 4,000$ per year in grants for graduate and undergraduate students in specified majors who intend to teach full-time in high-need subject areas for at least four years at schools classified as serving low-income students. For more information, please call or visit the Office of Financial Aid.

## Loans

## Federal Perkins Loans

The Federal Perkins Loan is a federally-funded student loan, but individual schools determine eligibility requirements. Priority is given to dependent undergraduate students who demonstrate high financial need (as determined by the Free Application for Federal Student-Aid). Repayment begins nine (9) months after the student graduates, leaves school, or drops below half-time enrollment status.

## Federal Direct Loans

Federal Direct Loans are made available to all students who file the Free Application for Federal Student Aid (FAFSA). The maximum loan is $\$ 5,500$ per year for the first year, $\$ 6,500$ for the second year, and $\$ 7,500$ per year for the junior and senior years. Repayment begins six (6) months after the student graduates, leaves school, or drops below halftime enrollment status. Repayment can be spread over a ten-year period. Based on the FAFSA, the student will qualify for an Unsubsidized Direct Ioan, Subsidized Direct loan, or a combination of both.

## Federal Parent Loan for Undergraduate Students

The Federal Parent Loan for Undergraduate Students (PLUS) provides a source of financing to all families regardless of the family income. All credit-worthy parents of dependent undergraduate students may borrow up to the cost of education minus financial aid per academic year for each student attending an accredited college. Standard repayment begins within sixty days after the loan is fully disbursed, however parents have the option to defer payments until their dependent student graduates. Repayment can be spread over a ten-year period.

## Private Alternative Educational Loans

Private Alternative Educational Loans are also available to help meet college expenses. The University of Dayton works closely with several lenders and their private loan programs, however students are able to borrow from the lender of their choice. These private loan programs offer competitive interest rates, flexible repayment schedules, and various co-signer requirements. If you are interested in a private alternative educational loan, please contact the Office of Financial Aid or visit our website (http://www.finaid.udayton.edu/alternative).

## Other Scholarship Opportunities

## Athletic Scholarships

Intercollegiate athletic scholarships are awarded each year to entering students. Contact the Department of Intercollegiate Athletics at (937) 229-2100 for additional information.

## Music Scholarships

Music scholarships are awarded on a competitive basis following auditions with the music faculty. Contact the Department of Music at (937) 229-3936 for additional information.

## Visual Arts Scholarships

Visual Arts Scholarships are awarded on a competitive basis. Entering students must submit a portfolio for consideration. A number of fouryear scholarships are awarded to students who demonstrate outstanding promise in the visual arts and who plan to pursue a degree in this field. Contact the Department of Visual Arts at (937) 229-3237 for additional information.

## Additional Scholarships Administered by the University of Dayton

The University will select students as nominees for scholarships offered by certain corporations, foundations, service organizations, alumni, families, and other benefactors.

## Payment Options

For those who prefer to budget annual school costs out of monthly income, the following options are available:

Credit Cards - Payment for any University charges may be made online or by phone with MasterCard, Visa, American Express, and/or Discover.

UD Payment Option - The University offers an open credit arrangement with installment provisions. All students are eligible for this plan. Students complete a one-time Credit Account Agreement form which is automatically sent prior to the first term of enrollment. Features of the plan include:

- Four payments per semester
- Payments begin July 25 for fall term and December 27 for spring term
- Low interest charge of $1 \%$ per month on the ending balance
- No application charge and no credit review

Sallie Mae Payment Plan - The University of Dayton understands that sometimes you need some help managing your tuition bill. That's why we offer a tuition payment plan administered by Sallie Mae. The plan is a convenient, manageable payment solution that gives you the option to pay tuition in interest-free monthly installments, rather than one lump sum. The Sallie Mae tuition payment plan offers:

- More time to pay. Spread your tuition payments over a period of several months
- Interest savings. Use the plan to make monthly payments, interest free
- Convenience. You can enroll in the plan, manage your account and make payments online 24 hours a day

The tuition payment plan administered by Sallie Mae offers you the opportunity to pay your tuition, interest free, in 10 payments beginning June 1.

Go to tuitionpay.salliemae.com (http://tuitionpay.salliemae.com) to enroll. If you have any questions about the plan, call Sallie Mae at 1-800-635-0120 and a specialist will be happy to assist you.

The University of Dayton reserves the right to make changes to payment options at any time.

## Residence Life Policy

Each first- and second-year student (classified by a student's high school graduation year, not by the number of credit hours) under 21 years of age, unmarried, and not living at parent's/legal guardian's permanent residence within 40 miles of the University of Dayton is required to live in University housing. A completed notarized statement is required from first- and second-year students requesting to commute from a parent's/ legal guardian's permanent residence.

Each student applying for a University residence facility must complete an online residential living contract with Housing and Residence Life. The contract covers both the fall and spring terms of the academic year. Once
a contract is signed, it may not be canceled without incurring substantial cost as long as the student is enrolled at the University.

Those students dropping all courses and checking out of housing during the first four weeks of school will be authorized refunds as stated under "Cancellations and Cancellation Charge".

All students living in housing facilities are required to observe all University regulations and specific regulations of each facility. Residents will be held responsible for any damages to the residential structure that are due to their own negligence, and will be billed for those damages at the time of discovery. Students will share responsibility with other residents of the structure for unidentified common area damages. Common area damage charges will be billed monthly when applicable. The same conditions shall also hold for any loss or damage to the University grounds, fixtures, furnishings, or other property provided by the University for use by the students.

Students may reside in their rooms, suites, apartments, or houses without additional charge during Thanksgiving and Easter recesses. All University residences are closed during Semester and Spring breaks.

## Room and Board, per term, Terms I and II August 2013 through May 2014

Choices for First-Year Students
Founders Hall \$3445.00
Marianist Complex \$3445.00
Marycrest Complex $\$ 3445.00$
Stuart Complex \$3445.00
Single Rooms in these residence halls $\$ 4000.00$

## Choices for Second Year Students

Virginia W. Kettering Suite Complex \$3445.00
Campus South Apartments $\$ 3445.00$
East Stewart Garden Apartments \$3445.00
South Quad Garden Apartments \$3445.00
819 Irving Avenue Apartments \$3445.00

Choices for Junior/Senior Students
Lawnview Apartments $\$ 4050.00$
ArtStreet Apartments $\$ 4050.00$
Caldwell Apartments $\$ 4050.00$
Irving Commons Apartments $\$ 3445.00$
1132 Irving Avenue Apartments $\$ 4000.00$
1806 Brown Street Apartments $\$ 4000.00$
Traditional Houses in the
Student Neighborhoods $\$ 4000.00$
New/Renovated/Sorority Houses in the
Student Neighborhoods $\$ 4200.00$
Choices for Graduate/Law School Students
Plumwood Studio Apartments $\$ 4000.00$
Plumwood Single Apartments $\$ 4250.00$
218 L Street Efficiencies $\$ 3445.00$
University Place Studio/Double Apartments $\$ 4750.00$
University Place Single Apartments $\$ 5100.00$

## Tuition Reductions

Tuition Remission/ Assistance for University of Dayton Fulltime employees
Full-time benefit-eligible employees, spouses, and children, when admitted in accordance with University of Dayton admission standards, are eligible for tuition remission/assistance benefits. Eligible employees receive $100 \%$ remission for both graduate and undergraduate classes for themselves up to 18 credit hours per academic year, not to exceed 6 credit hours in each of the first and second semesters.

Spouses and children are eligible for undergraduate tuition assistance only based on years of benefit-eligible service. Please refer to the appropriate University of Dayton Benefit Handbook for the schedule of dependent tuition assistance.

## Senior Fellows

Students 60 years of age and over are eligible to apply through the College of Arts \& Sciences at the University of Dayton for remission of tuition.

# Undergraduate Tuition and Charges August 2013 through July 2014 

## Tuition Charges in Terms I and II

Full-time undergraduate student (12-18 semester hours), per term \$17,900
$3 / 4$-time undergraduate student ( 8 - 11 semester hours), per term $\$ 13,428$
Part-time undergraduate student (1-7 semester hours), per semester hour \$1,194
Audit course, per undergraduate semester hour \$597
Tuition Charges in Term III
Tuition per semester hour \$1,194

## Other Charges

Late registration service charge 25.00 per week to a maximum of $\$ 75.00$ Credit by examination, per semester hour $\$ 35.00$
CLEP per credit hour $\$ 35.00$
Books and supplies variable

## Full-time and 3/4-time Students

A student with an academic schedule of at least 12 semester hours is considered a full-time student. A student with an academic schedule of $8-11$ semester hours is considered a $3 / 4$-time student. With this status and upon payment of tuition, the student is entitled to the benefits of the various activities and student services as available.

## Part-time Students

A student with an academic schedule of fewer than 8 semester hours is considered a part-time student.

## Special Students

Special students and non-matriculated students (continuing education) are subject to the various expenses outlined above for full-time, $3 / 4$-time, or part-time students.

## Academic InformationUndergraduate

In this section:

- Academic Standing (p. 37)
- Awards (p. 37)
- Class Attendance Policy (p. 43)
- Class Standing (p. 43)
- Dean's List (p. 43)
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## Academic Standing

The student's academic standing is determined by the cumulative gradepoint average at the end of each term.

1. To be in good academic standing, a student must have a cumulative grade-point average of (a) at least 1.7 at the end of the first and second terms, (b) at least 1.8 at the end of the third term, (c) at least 1.9 at the end of the fourth term, and (d) at least 2.0 at the end of the fifth and succeeding terms. For part-time and transfer students, a block of 12 semester hours of credit is considered one term. A cumulative grade-point average of at least 2.0 is required for graduation.
2. A cumulative grade-point average below the one required will place the student on academic probation. The student's academic dean will notify the student of his or her probationary status. A student on probation must follow a restricted academic program not to exceed 15 semester hours.
3. It is the responsibility of any student on academic probation to complete a contract with the dean for the purpose of determining the nature and limitations of the student's future academic and extracurricular activities.
4. Students whose academic performance has seriously impaired their ability to succeed academically at the University of Dayton are subject to dismissal. A student who is subject to academic dismissal can be dismissed only by his or her academic dean, who authorizes the dismissal and notifies the student of his or her status. Students who are subject to dismissal include (a) those who fail to achieve good standing at the end of a term on probation and (b) those who have a term point average of less than 1.0, regardless of cumulative grade-point average.
5. The Registrar will post "Academic Dismissal" on the permanent record of any student who is dismissed.

## Awards

Special awards for exceptional scholastic achievement are given annually through the generosity of donors. To be eligible for any of these awards, a student must have a cumulative grade point average of at least 3.0. The awards:

Accounting - Award of Excellence to the Outstanding Senior in Accounting-donated by Jerome E. Westendorf, '43, and Warren A. Kappeler, '41.

Accounting - Award of Merit in Recognition of Outstanding Achievementdonated by The Ohio Society of Certified Public Accountants, Dayton Chapter.

Accounting - Accounting Career Award to a Student Exhibiting Great Potential in the Accounting Profession-donated by the Institute of Management Accountants, Dayton Chapter.

Accounting - The Clark-Eley-Fioriti Award for Outstanding Service to the Department of Accounting-donated by the alumni and faculty of the Department of Accounting.

Anthropology - The Margaret Mary Emonds Huth Memorial Award of Excellence to the Outstanding Senior in Anthropology-donated by Dr. Edward A. Huth.

Arts and Sciences - International Learn, Lead and Serve Award-donated in honor of Steven C. Buck, 2003.

Arts and Sciences - The Dean Leonard A. Mann, S.M., Award of Excellence to the Outstanding Senior in the College of Arts and Sciences-donated by Joseph Zusman, '65.

Athletics - The Reverend Charles L. Collins, S.M., Award of Excellence to an Athlete for Outstanding Citizenship-donated by Joseph Zusman, '65.

Athletics - The Charles R. Kendall, '29, Memorial Award of Excellence for Achievement in Academic and Athletic Effort-donated by Mrs. Charles R. Kendall and friends.

Athletics - The John L. Macbeth Memorial Award to the Outstanding Scholar-Athlete in Football and Basketball. The recipient must have completed five or more terms and won a varsity letter.

Athletics - The Ann E. Meyers Award of Excellence for Achievement in Academic and Athletic Effort in Women's Basketball and Volleyball.

Biology - The P.K. Bajpai Undergraduate Research Award to the Undergraduate Student Who Best Represents the Spirit of Undergraduate Research in Biology.

Biology - The John J. Comer Biomedical Undergraduate Research Award to the Undergraduate Student Who Best Demonstrated Research Excellence in Biomedical Science as a Biology Major.

Biology - The John J. Comer Ecological Undergraduate Research Award to the Undergraduate Student Who Best Demonstrated Research Excellence in Ecology as a Biology Major.

Biology - The John E. Dlugos, Jr., Memorial Award of Excellence to the Outstanding Senior Majoring in Biology-donated by Mr. and Mrs. John E. Dlugos.

Biology - The Brother Russell A. Joly, S.M., Award of Excellence to the Student Who Best Combines Excellence in Biology and Genuine Appreciation of Nature.

Biology - Learn, Lead and Serve Undergraduate Award of Excellence to the Biology Undergraduate Student Who Completed an Outstanding Experiential Learning Project, which included both Leadership and Service.

Business Administration - The Dick Flaute Award for Exceptional Service, Recognizing Exemplary Service by a Graduating Student in a Flyer Enterprises Activity.

Business Administration - The Sam Gould Award for Leadership Excellence, Recognizing Outstanding Leadership by a Graduating Senior in a Flyer Enterprises Management Position.

Business Administration - Outstanding Peer Advisor Award.
Business Administration - The Miriam Rosenthal Award of Excellence to a Graduating Senior in the School of Business Administration-donated by Dean William J. Hoben.

Business Administration - The Mark T. Schneider Award to a Senior in the School of Business Administration Who Has Combined Academic Excellence with Service to the University and the Community-donated by family and friends in his memory.

Campus Ministry - The Nancy Bramlage Award, presented by Campus Ministry's Center for Social Concern, to Deserving Students or Student Groups that have most Effectively used Nonviolent Direct Action to Work for Change.

Campus Ministry - Marianist Award for Voluntary Service to a Graduating Senior Who Has Earned Distinction through Voluntary Service to the Community-donated by the Marianists of the University of Dayton.

Campus Ministry - The Brother Wottle Campus Ministry Award: "An Award of Appreciation for Service to Campus Ministry."

Chemical and Materials Engineering - The Victor Emanuel, '15, Award of Excellence to the Outstanding Senior in Chemical Engineering-sponsored by the University of Dayton Alumni Association since 1962.

Chemical and Materials Engineering - The Raymond L. Fitz, Sr., Memorial Award of Excellence to the Outstanding Sophomore in Chemical Engineering.

Chemical and Materials Engineering - The Edmund J. Rolinski Memorial Award of Excellence to the Outstanding Senior in Leadership and Service.

Chemical and Materials Engineering - The Robert G. Schenck Memorial Award of Excellence to the Outstanding Junior in Chemical Engineeringdonated by Stanley L. Lopata.

Chemistry - American Chemical Society Analytical Award.
Chemistry - American Chemical Society Award: Patterson College Chemistry Award.

Chemistry - American Chemical Society, Division of Organic Chemistry Award to a Senior Student for a 1-year Membership.

Chemistry - American Institute of Chemists' Award.

Chemistry - CRC PRESS Freshman Chemistry Achievement Award to a Deserving First-Year Student Majoring in Chemistry.

Chemistry - Dupont Summer Research Fellowship Award.
Chemistry - The Brother George J. Geisler, S.M., Award of Excellence to the Outstanding Student in Chemistry-donated by Joseph Poelking, '32.

Chemistry - The Arlo D. Harris Assistance Fund to a Deserving Student Majoring in Chemistry.

Chemistry - The Bernard J. Katchman Memorial Scholarship/Carl I. Michaelis Scholarship Award to an Entering First-Year Student Majoring in Chemistry.

Chemistry - The Brother John J. Lucier, S.M., Award of Excellence to the Outstanding Junior Majoring in Chemistry-donated by a friend.

Chemistry - The Carl I. Michaelis Scholarship Award to a Deserving Junior or Senior Majoring in Chemistry.

Chemistry - Polymer Education Committee Award for Outstanding Performance in Organic Chemistry.

Chemistry - The Philip Zaidain Memorial Award to a Deserving Student Majoring in Chemistry.

Civil and Environmental Engineering and Engineering Mechanics - The George A. Barrett, '28, Award of Excellence to the Outstanding Junior in Civil Engineering-donated by family and friends in his memory.

Civil and Environmental Engineering and Engineering Mechanics - The Harry F. Finke, 1902, Award of Excellence to the Outstanding Senior in Civil Engineering-sponsored by the University of Dayton Alumni Association since 1962.

Communication - The Joan M. Broskey Memorial Award for Outstanding Academic and Professional Achievements in Public Relations.

Communication - Faculty Award for Academic Excellence to the Senior with the Highest Cumulative and Major Grade Point Averages-donated by the faculty of the Department of Communication.

Communication - The Bette Rogge Morse Award to the Outstanding Senior Woman in Communication.

Communication - The Dr. Florence I. Wolff Achievement Award for Outstanding Contributions in Academic, Extracurricular and Community Service Activities.

Communication-Broadcasting - The Omar Williams Award of Excellence to the Outstanding Student in Broadcasting-donated by the University of Dayton.

Communication-Debating - The Mary Elizabeth Jones Memorial Award of Excellence to an Outstanding Debator-donated by Dr. D. G. Reilly.

Communication-Journalism - The Ritter Collett Award of Excellence to the Outstanding Senior in Journalism. Awarded annually to the student who best demonstrates in his/her person and writings the qualities of Mr. Collett that the University hopes will serve as an inspiration to the journalism students.

Communication-Journalism - The Brother George F. Kohles, S.M., Award of Excellence in Journalism-donated by a friend.

Communication-Mass Media Arts - The Si Burick Award of Excellence for Outstanding Academic and Cocurricular Achievement in Mass Media Arts-donated by the University of Dayton.

Communication-Public Relations - The PRSA Maureen M. Pater Award of Distinction to the Outstanding Senior in Public Relations-donated by the Dayton-Miami Valley Chapter of the Public Relations Society of America.

Communication-Speech Arts - The Reverend Vincent R. Vasey, S.M., Award of Excellence to the Outstanding Senior in Speech Arts-donated by Reverend Vincent R. Vasey, S.M.

Communication Management - The Ellen M. Murphy Award of Excellence to the Outstanding Senior in Communication Management.

Computer Science - Award for Outstanding Service to the Department of Computer Science.

Computer Science - Chair's Award for Excellence in Computer Science.
Computer Science - The Lawrence A. Jehn Alumni Award for Excellence in the Senior Class.

Computer Science - The Pearson Senior Book Award for Excellence in Computer Science-donated by the Addison-Wesley Publishing Company.

Computer Science - The Father Thomas Schoen Award for Innovative Programming.

Continuing Education - The Nora Duffy Award to a Reentry Student who has Overcome Significant Obstacles in order to Complete a College Degree.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Business Administration-sponsored by the Mead Corporation Foundation.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Computer Science-Computer Information Systems-sponsored by the Marathon Oil Foundation.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Engineering-sponsored by the Dayton Power and Light Company.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Engineering Technology-sponsored by Earl C. Iselin, Jr., in honor of his father.

Criminal Justice - The Sheriff "Beno" Keiter Memorial Scholarship Award to the Outstanding Junior or Senior in Criminal Justice-donated by friends of "Beno" Keiter.

Early Childhood Education - The Kacie Hausfeld Award of Distinction to the Graduating ECE Senior Who Displays the Spirit of Kacie: A Passion for Teaching; a Commitment to Service; a Vibrant and Encouraging Leader; and an Enthusiasm for Life.

Economics - The Dr. E. B. O'Leary Award of Excellence to the Outstanding Senior Majoring in Economics.

Electrical and Computer Engineering - The Thomas R. Armstrong, '38, Award of Excellence for Outstanding Electrical Engineering Achievement in Memory of Brother Ulrich Rappel, S.M., and W. Frank Armstrong.

Electrical and Computer Engineering - The Anthony Horvath, '22, and Elmer Steger, '22, Award of Excellence to the Outstanding Senior in Electrical Engineering-donated by Anthony Horvath and Elmer Steger.

Electrical and Computer Engineering - The Mary C. Millette Endowment Award for the Outstanding Senior Electrical Engineering Student in Memory of Mary C. Millette.

Electrical and Computer Engineering - The Brother Louis H. Rose, S.M., '33, Award of Excellence to the Outstanding Junior in Electrical Engineering.

Electronic Engineering Technology - The Richard R. Hazen Award of Excellence for the Outstanding Graduate of the Electronic Engineering Technology Program-donated by alumni and friends of the department.

Elementary Education - The George A. Pflaum, '25, Award of Excellence to the Outstanding Students in Early Childhood and Middle Childhood Education-donated by George A. Pflaum, Jr.

Engineering/Humanities - The James L. Heft, S.M., Award of Excellence to the Graduating Senior who Demonstrates a High Degree of Integration of These Different Fields of Knowledge: Humanities and Engineeringdonated by Dr. Rocco M. Donatelli.

Engineering Technology - The L. Duke Golden Award of Excellence to the Outstanding Senior in Engineering Technology-donated by the Gamma Beta Chapter of Tau Alpha Pi Honor Society.

English - The Patricia B. Labadie Award for Excellence in Composition.
English - The Brother Thomas P. Price, S.M., Award of Excellence to the Outstanding Senior in English-donated by the University of Dayton Mothers' Club.

English Education - The Dr. Harry E. Hand Memorial Award of Excellence-donated by the faculty of the Department of English and the Department of Teacher Education.

Entrepreneurship - Award of Excellence to the Graduating Senior Majoring in Entrepreneurship Who Best Embodies Outstanding Academic Achievement-sponsored by Fifth Third Bank.

Entrepreneurship - Entrepreneural Leadership Award to the Graduating Senior Majoring in Entrepreneurship who Exhibits the Greatest Potential for Leadership as an Entrepreneur-sponsored by Robert F. Chelle, Crotty Center Founding Director.

Environmental Biology - Environmental Biology Award of Excellence to the Outstanding Environmental Biology Major Who Excels in all Areas of Academic Scholarship and Overall Service.

Environmental Biology - Environmental Biology Internship Achievement Award of Excellence to the Environmental Biology Major Who Has Demonstrated Significant Achievement while Pursuing Practical Experience through the Internship Program.

Finance - Award of Excellence to the Outstanding Senior Majoring in Finance.

Finance - Davis Center for Portfolio Management Excellence in Leadership Award to the Outstanding Senior on the Center for Portfolio Management Team.

Finance - Flyer Investment Excellence in Leadership Award to the Outstanding Student on the Flyer Investment Portfolio Management Team.

Finance - The Douglas R. Scott "Best Efforts Award" to the Finance Major Deemed to Have Worked the Hardest Both in and out of the Classroom.

General Excellence - The Mary M. Shay Award of Excellence in Both Academic and Extracurricular Activities (Seniors only)-donated by the Poelking Family.

Geology - The George H. Springer Scholarship to the Outstanding Senior in the Geology Department-donated by alumni of the department.

Health and Sport Science - The Thomas J. Frericks Award of Excellence to the Outstanding Senior in Sport Management-donated by the faculty of the School of Education.

Health and Sport Science - The James M. Landis Memorial Award of Excellence for the Outstanding Health and Sport Science Senior in Science Core Courses.

Health and Sport Science - The James B. LaVanche Award of Excellence to the Outstanding Scholar-Athlete Graduating in the Department of Health and Sport Science-donated by the faculty and alumni of the department.

Health and Sport Science - The John L. Macbeth Memorial Award of Excellence to the Outstanding Student in Health and Sport Sciencedonated by Mrs. John L. Macbeth.

Health and Sport Science - The Reverend George J. Renneker, S.M., Award of Excellence for Outstanding Achievement in the School of Education and Health Sciences.

Health and Sport Science - The Elizabeth L. Schroeder Award of Excellence to the Outstanding Senior in the Food and Nutrition Program for Academic, Departmental and Professional Performance.

History - The Caroline Beauregard Award of Excellence to the Outstanding Junior Majoring in History-donated by family and friends in her memory.

History - The Dr. Samuel E. Flook Award of Excellence to the Outstanding Senior Majoring in History-donated by Dr. Samuel E. Flook.

History - The Betty Ann Perkins Award for Excellence in Women's and Family History-donated by her family.

History - The Dr. George Ruppel, S.M., Award of Excellence in Historical Research.

History - The Steiner-Beauregard Phi Alpha Theta Service Award for Significant Service Promoting the Activities of the Delta Eta Chapter (Delta Eta Chapter members only)-donated by Dr. Rocco M. Donatelli.

Humanities - Award of Excellence-Alumni Chair in Humanities Award for Students Writing in the Humanities Base Essay Contest.

Humanities - The Rocco M. Donatelli Award to the Humanities Senior with the Strongest Quantitative and Qualitative Record in Elective Science Courses.

Human Rights - Award of Excellence to Outstanding Senior.
Human Rights - Award of Excellence to Outstanding Junior.

Industrial Engineering Technology - The James L. McGraw Award to the Outstanding Graduate of the Industrial Engineering Technology Programdonated by the Dayton Chapter of the Institute of Industrial Engineers.

Industrial Engineering Technology - The Raymond B. Puckett Memorial Award to the Outstanding Junior in Industrial Engineering Technology.

International Business - Award of Excellence to the Graduating Senior Majoring in International Business Who Has Best Combined Academic Achievement with Service to the University and Community.

International Studies - The Dr. Margaret P. Karns Award for Academic Excellence and Service in Global and Local Issues.

International Studies - Outstanding Senior Award for International Studies.

International Studies - International Studies Peer Mentorship Award.
Languages - The Brother John R. Perz, S.M., Award of Excellence to the Outstanding Senior in Modern Languages-donated by the Joseph Poelking, Sr. family.

Languages-French - The Brother George J. McKenzie, S.M., Award of Excellence to the Outstanding Senior in Written French-donated by a friend.

Languages-French - The Professor Enrique Romaguera Award of Excellence to the Outstanding Senior in Spoken French-donated in honor of his retirement in May 2005.

Languages-German - The Dr. Elke Hatch Award of Excellence to the Ouststanding Senior German Major.

Languages-Spanish - The Dr. James M. Ferrigno Award of Excellence to the Outstanding Senior in Spanish-donated by Enrique Romaguera and Mary A. Ferrigno.

Leadership - Alumni Award in Leadership to the Graduating Senior Majoring in Leadership Who Best Embodies the Principles of Learn, Lead and Serve-sponsored by Charles Huston Brown, '20, and Maurice F. Krug, '55.

Leadership - Leadership Award of Excellence to the Graduating Senior Majoring in Leadership Who Best Embodies Outstanding Academic Achievement-sponsored by the Reynolds and Reynolds Company and the Standard Register Company.

Leadership - Wall Street Journal Award for General Management to the Graduating Senior in Leadership and/or Entrepreneurship Considered to Have the Greatest Potential for General Management Responsibilitiessponsored by Dow Jones and Company, Inc.

Library - The Brother Frank Ruhlman, S.M., Award of Excellence for Literary Achievement.

Management and Marketing - Management/Marketing Department Award for Perseverance to the Graduating Senior Majoring in Entrepreneurship, Leadership or Marketing Who Has Displayed the Most Initiative and Perseverance in Pursuing an Undergraduate Education-sponsored by the faculty of the Management and Marketing Department.

Management Information Systems - Management Information Systems Design Project Award to the Team Producing the Best Senior Year MIS Project.

Management Information Systems - Management Information Systems Award to a Graduating Senior in MIS for Outstanding Contributions to the MIS Program.

Management Information Systems - Management Information Systems Scholarship Award to a Graduating Senior in MIS for Outstanding Academic Achievement.

Manufacturing Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence for Manufacturing Engineering Technology Achievement.

Manufacturing Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence to the Outstanding Graduating Senior in Manufacturing Engineering Technology.

Marketing - Marketing Award of Excellence to the Graduating Senior Majoring in Marketing Who Best Embodies Outstanding Academic Achievement.

Marketing - Marketing Career Award to the Graduating Senior Majoring in Marketing Who Exhibits the Greatest Potential in Marketing.

Marketing - Marketing Service Award to the Graduating Senior Majoring in Marketing Who Best Embodies the Principles of Learn, Lead and Serve.

Mathematics - Senior Award for Excellence in Support of Mathematics.
Mathematics - Senior Award for Academic Excellence in Mathematics.

Mathematics - Sophomore Award for Excellence in Mathematics.
Mathematics Education - The Brother Joseph W. Stander, S.M., Award of Excellence to a Graduating Senior in the Teacher Licensure Program with a Principal Teaching Field in Mathematics.

Mechanical and Aerospace Engineering - Class of 1902 Award of Excellence for Outstanding Mechanical Engineering Achievementdonated by Michael J. Gibbons, 1902, in memory of Warner H. Kiefaber, 1905.

Mechanical and Aerospace Engineering - The Professor Henry Chuang Award for Excellence in Energy Conservation and Waste Management.

Mechanical and Aerospace Engineering - The Bernard F. Hollenkamp, '39, Memorial Award of Excellence to the Outstanding Senior in Mechanical Engineering-donated by Louise A. and Mrs. Lucille Hollenkamp.

Mechanical and Aerospace Engineering - The Martin C. Kuntz, 1912, Award of Excellence to the Outstanding Junior in Mechanical Engineering-sponsored by the University of Dayton Alumni Association since 1962.

Mechanical and Aerospace Engineering - The Brother Andrew R. Weber, S.M., Award of Excellence for Outstanding Service and Achievement in Mechanical Engineering.

Mechanical Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence for Mechanical Engineering Technology Achievement.

Mechanical Engineering Technology - The Jesse H. Wilder Award of Excellence to the Outstanding Graduating Senior in Mechanical

Engineering Technology-sponsored by the Dayton Chapter, Society of Manufacturing Engineers.

Military Science - Department of the Army Award. The Superior Cadet Award, provided by the Department of the Army, to the Outstanding Cadet of each academic year.

Military Science - The Brian J. Bentz Memorial Scholarship Award to the Outstanding Junior ROTC Cadet Who Exemplifies the Dedication and Commitment for Further Study in Military Science-donated by his family and friends.

Military Science - The Lieutenant Robert M. Wallace, '65, Memorial Award of Excellence in ROTC-donated by his family and friends.

Music - Department of Music Senior Award for the Outstanding Collaborative Pianist.

Music - Department of Music Senior Award for Outstanding Contribution to University Concert Bands.

Music - Department of Music Senior Award for Outstanding Contribution to University Athletic Bands.

Music - Department of Music Senior Award for Outstanding Contribution to University Jazz Bands.

Music - Department of Music Senior Award for Outstanding Contribution to the University Orchestra.

Music - Department of Music Senior Award for Outstanding Contribution to the University Vocal Ensembles.

Music - The Brother Joseph J. Mervar, S.M., Award of Excellence to the Outstanding Student Majoring in Music.

Music - NAfME Professional Achievement Award.
Music - The Brother Todd Ridder, S.M., Award of Excellence for Outstanding Service by a Student Majoring in Music.

Music - Phi Mu Alpha College Honor Award for Musicianship, Scholarship and General Contributions to the College Charpter.

Music - Phi Mu Alpha Professional Music Fraternity Scholastic Award to the Chapter's Graduating Senior Who Has Attained the Highest Scholastic Rating.

Music - Sigma Alpha lota College Honor Award for Musicianship, Scholarship and General Contributions to the College Chapter.

Music - Sigma Alpha Iota Professional Music Fraternity Scholastic Award to the Chapter's Graduating Senior Who Has Attained the Highest Scholastic Rating.

Operations and Supply Management - Operations Management Outstanding Scholarship Award to a Graduating Senior in OPS for Academic Excellence.

Operations and Supply Management - Operations Management Outstanding OM Senior Project Award to the Team Producing the Best Senior Year OPS Project.

Operations and Supply Management - Operations Management Professional Service Award to a Graduating Senior in OPS for Outstanding Contributions to the OPS Program.

Philosophy - The Rev. Charles Polichek First Award of Excellence to the Outstanding Senior in Philosophy

Philosophy - The Rev. Charles Polichek Second Award of Excellence to the Outstanding Senior in Philosophy

Philosophy - The Richard R. Baker Award of Excellence in Philosophy to a Graduating Student Who Has Earned Distinction in the Study of Philosophy through Commitment to Philosophical Inquiry and Assisting Other Undergradute Students in Their Pursuit of Philosophical Studies.

Philosophy - The Reverend Charles C. Bloemer, S.M., Award of Excellence to the Outstanding Junior Majoring in Philosophy-donated by a friend.

Philosophy - The Raymond M. Herbenick Award of Excellence in Interdisciplinary Integration to a Student Completing the CORE Programdonated by the Department of Philosophy faculty.

Physics - The Caesar Castro Award of Excellence to a Sophomore for Outstanding Scholarship in the General Physics Lecture and Laboratory Sequence-donated in memory of Caesar Castro by Mrs. C. C. Castro and the Department of Physics

Physics - Sigma Pi Sigma Award of Merit to a Senior in Recognition of Outstanding Academic Achievement and Involvement in Physicssponsored by the Department of Physics and the Sigma Pi Sigma Honor Society of the Society of Physics Students.

Political Science - The Brother Albert H. Rose, S.M., Award of Excellence to the Outstanding Senior in Political Science-donated by Joseph Zusman, '65

Political Science - The Eugene W. Stenger, '30, Memorial Award of Excellence to the Outstanding Junior in Political Science-donated by Mrs. Eugene W. Stenger.

Premedicine - Miami Valley Academy of Family Physicians Award to the Graduating Senior whose Activities Exemplify the Philosophy of Family Medicine.

Premedicine - The Brother Francis John Molz Memorial Award to the Outstanding Senior in Premedicine. Awarded annually to the student who best demonstrates the qualities of unselfishness, community service, and academic achievement-sponsored by Alpha Epsilon Delta.

Premedicine - Montgomery County Medical Society Award to the Outstanding Senior in a Premedical Curriculum.

Premedicine - The Joseph E. Scherger, MD, MPH Leadership in Medicine Award to a Graduating Premedical Student Who Has Demonstrated Leadership Toward Improving the Health of the Public Through Better Health Care.

Psychology - The Charles E. Kimble Research Award to the Graduating Senior Who Best Demonstrated Research Excellence in Psychology.

Psychology - The Kenneth J. Kuntz Award for Outstanding Servicedonated by the Department of Psychology faculty.

Psychology - The Reverend Raymond A. Roesch, S.M., Award of Excellence to the Outstanding Student in Psychology-donated by Reverend Raymond A. Roesch, S.M., '36.

Rector - The Maureen E. O'Rourke Marianist Student Award to the Graduating Senior Who Exemplifies the Marianist Charism on Campus.

Religious Studies - The William Joseph Chaminade Award of Excellence, in memory of Mr. and Mrs. George W. Dickson, to the Outstanding Student in Theology-donated by Reverend John Dickson, S.M., '36.

Religious Studies - The Monsignor J. Dean McFarland Award of Excellence to the Outstanding Junior Majoring in Religious Studies.

Secondary Education - The Brother Louis J. Faerber, S.M., Award of Excellence to the Outstanding Student in Adolescence to Young Adult Education-donated by the University of Dayton Mothers' Club.

Social Work - The Joseph Zusman, '65, Award of Excellence to the Outstanding Senior in Social Work Studies-donated by Joseph Zusman, '65.

Sociology - The Dr. Edward A. Huth Silver Anniversary Award of Excellence to the Outstanding Student in Sociology-donated by Joseph Zusman, '65.

Sociology - The Dr. Martin Luther King Memorial Award in Human Relations for Excellence in Scholarship, Christian Leadership and the Advancement of Brotherhood and Sisterhood-donated by Dr. Edward A. Huth.

Sociology - The Reverend Andrew L. Seebold Award of Excellence to the Outstanding Senior in Sociology.

Teacher Education - The William A. Beitzel Award to the Outstanding Student in Intervention Specialist Education-donated by Dean Emeritus Ellis A. Joseph

Teacher Education - The Raymond and Beulah Horn Award of Excellence to the Outstanding Student in the Area of Intervention Specialist Education-donated by Dean Emeritus Ellis A. Joseph.

Teacher Education - The Daniel L. Leary Award for the Outstanding Research and Development Activity by a Student Seeking Teacher Licensure in the School of Education-donated by Dean Emeritus Ellis A. Joseph.

Teacher Education - The Frank and Lois New Award for Outstanding Achievement to a Graduating Senior in the Teacher Education Program with a Principal Teaching Field in Intervention Specialist Education.

Teacher Education - The Reverend George J. Renneker, S.M., Award of Excellence for Outstanding Achievement in Teacher Education.

Teacher Education - The Dr. Mary R. Sudzina Award for Demonstrated Excellence in Case Study Analysis in Adolescence to Young Adult Education.

Theatre - The Dr. "G." Award for Outstanding Commitment to Mainstage Theatre Recognizing a Graduating Senior Who Has Demonstrated a Willingness to Involve Himself/Herself in the Wide Spectrum of Theatrical Productions on the Boll Theatre Mainstage.

University Advancement - Award of Excellence for Contribution of Service to the Community.

University Honors Program - The Patrick F. Palermo Founders Fund Fellowship Award.

Visual Arts-Fine Arts - The Mary Ann Dunsky Award to the Outstanding Senior in Studio Art.

Visual Arts-Fine Arts - The Bela Horvath Award for Excellence in Representational Art.

Women's Studies - The Joyce Durham Award for the Best Student Essay on the Subject of Women or Gender.

Women's Studies - The Susan R. Hermes Award for Excellence in Women's Studies-donated by Drs. Jane S. Zembaty and Patricia A. Johnson.

## Class Attendance Policy

It is desirable for students to attend all classes. Listening to the lectures of instructors and being involved in classroom discussions should (1) provide guidelines and goals in the course of study, thus lending direction to the study activities of the student; (2) provide instances of the way of thinking and methodology employed by an academic discipline in formulating and solving problems; and (3) stimulate an awareness of/ and interest in the course topics beyond the levels acquired by textbook reading.

Because textbook material is generally beneath the level of the current state of knowledge, instructors acquaint the student with new ideas and integrate this material into the course topics. Students are responsible for being aware of the proceedings and material covered in each class period.

Students must attend all announced tests and submit assigned written work on the date set by the instructor; it is recommended that the instructor announce such tests and assignments at least a week in advance. The action taken as a consequence of missing a test or an assignment will be determined by the instructor and will be based on a consideration of the individual circumstances involved.

To assist first-year students in their transition to college responsibilities, it is felt that a policy of compulsory attendance is necessary. Therefore, first-year students will be permitted only a limited number of absences. For first-year students, the allowable number of absences in the first term or in the second term will be equal to twice the meeting times a week (or four class days in any third-term session).

A student exceeding this number will be referred to the student's dean for possible counseling and appropriate action. Any undergraduate student who has not yet accrued 30 semester hours of credit is considered a firstyear student.

In addition to the first-year student policy, faculty may institute an attendance requirement. This may be done for any course (including seminars, laboratories, performance courses, clinical field-based courses, and the like) provided that the policy is approved by a faculty committee of the department and/or the department chair. If attendance is used as a grading component, the instructor is obligated to clarify his or her classroom policy regarding absences in writing in the syllabus provided during the first full week of the semester.

In cases where unusual circumstances combine to cause a student to miss any class time for reasons beyond the student's control (viz., personal illness, death in the immediate family, religious holidays, University-sanctioned activity, emergency limitations on commuter travel
in severe weather-related conditions), faculty members should give due diligence to reviewing the student's particular case

Let it be noted that to insure accuracy of records, every student must be present at class during the first week of each term.

## Class Standing

First-Year student: 0-29.9 semester hours completed
Sophomore: 30-59.9 semester hours completed
Junior: 60-89.9 semester hours completed
Senior: 90 semester hours completed and over

## Graduation

Commencement at the University of Dayton is formal recognition of students who are graduating from the University. Consequently, University policy limits participation in commencement to students who have completed all the requirements for their degree. However, undergraduate students who are short not more than seven credit hours prior to the May commencement may, with the approval of their dean, participate in the May graduation ceremony. Such students must be registered for sufficient hours to complete degree requirements during the subsequent summer terms at UD, or have attained approval to fulfill their remaining requirements at another institution, and must provide official documentation of work completed no later than the official date for submission of grades at the conclusion of UD's second summer session. Any exceptions to this policy are the decision of the dean of the student's academic unit. After all degree requirements are met, the degree will be conferred on the next conferral date as noted on the official university academic calendar.

If the student is declaring candidacy for Graduation, a graduation application must be completed online (https://porches.udayton.edu). If a student is receiving two degrees, two separate graduation applications, one for each degree, must be completed. For further information visit the Flyers First website (http://www.udayton.edu/flyersfirst) .

After the summer of 2002, students completing their degree requirements during the summer term will receive a diploma and their academic transcript will denote an August graduation date, but they will have to wait until December to participate in a graduation ceremony.

## Dean's List

## Dean's List

At the conclusion of the Fall, Spring, and Summer terms, in both the college and the professional schools, any currently registered, degreeseeking undergraduate student completing a minimum of twelve semester hours with a grade point average of 3.50 or above is named to the Dean's List. For purposes of this list, the total hours completed during the multiple Summer sessions are treated as being a single term.

## Dean's Recognition List

At the conclusion of the Fall, Spring, and Summer terms, in both the college and the professional schools, any currently registered, degreeseeking undergraduate student completing no less than six semester hours and not more than eleven and one-half semester hours with a grade point average of 3.50 or above is named to the Dean's Recognition

List. For purposes of this list, the total hours completed during the multiple Summer sessions are treated as being a single term.

The Dean's List and Dean's Recognition List can be viewed at: http:// www.udayton.edu/flyersfirst.

## Final Exam Policy

To protect and strengthen the academic integrity of the final examination week at the University of Dayton, the following policy on final examination week has been adopted effective for the 2004-05 academic year[1]

1. Final examination week is defined as the sum of one full week of scheduled examinations, the weekend immediately preceding, and a minimum of one study day. Multiple study days are preferred.
2. Every course of study, undergraduate and graduate, must conclude with an academically rigorous culminating learning experience, normally a final examination. A culminating learning experience may involve traditional in-class examinations, presentations, performances, critiques, portfolios or other similar experiences. Laboratory, studio, or similar courses may be regularly exempt from this requirement, with the approval of the department chair and a designated administrator in the office of the dean.
3. No new material may be introduced in a course after the last scheduled class meeting. No final examination may be scheduled at a time other than the time prescribed by the Registrar during final examination week, with the sole exception of block examinations. No final examination of any kind may be given prior to final examination week. Any exceptions must receive the approval of the department chair.
4. A block examination is a common examination that covers several sections of the same class, taught by different instructors, for the purpose of establishing a uniform scale of achievement. Such examinations are scheduled through the registration office. Multiple sections of a class, taught by the same instructor, are not eligible to give block examinations unless they are part of a class taught by more than one instructor.
5. Grades for all students, including graduating students, will be reported by a single deadline, as determined by the Registrar.
6. When a student has three or more final examinations scheduled for the same day, faculty are encouraged to accommodate the individual student on an alternative day agreeable to both the student and the instructor. The student must make the request by the last scheduled class meeting.
a. When a student with a disability has two or more final exams scheduled for the same day, faculty are encouraged to accommodate the individual student on an alternative day agreeable to both the student and the instructor which may include use of an alternative testing site. The student must make the request by the last scheduled class meeting.[2]
7. Students must have access to graded examinations for a period of six months after the examination has been given.
8. Any on-going or regular exception to the final examination policy requires the approval of the department chair and a designated administrator in the office of the dean.
9. The School of Law is exempt from this policy, due to its independent academic calendar.
[1] Approved by the Academic Senate December 12, 2003, document number I-03-10, Final Examination Week
[2] Amendment to Academic Senate document number I-03-10, Final Examination Week, approved February 6, 2004

## First-Year Experience Program

The University First-Year Experience Program includes a course, offered for a minimum of one credit, for all first-year students in the College of Arts and Sciences, the School of Business Administration, the School of Education and Health Sciences, and the School of Engineering. This course is combined with selected programs and services offered by Student Development, Campus Ministry, and academic support programs. First-year students entering in January and transfer students will be offered an alternative program to meet their needs.

## The First-Year Experience Program

- Introduces the distinctive nature of the Catholic/Marianist educational experience as a foundation for learning and life
- Provides an academic foundation that helps students develop as connected learners, acquire general competencies necessary for their success, understand the nature and requirements of chosen and/or potential programs of study, and be aware of a range of opportunities for enriching their academic experience on campus, across the nation, and around the world
- Prepares students in critical reflection on the moral and ethical dimensions of their lives, challenges students to treat each individual with equality and respect, fosters the recognition of individual rights and responsibilities of each member of the community, and establishes integrity as central to professional and career decisions
- Promotes the development of self-understanding and skills that enable students to take responsibility for their academic success and lifelong learning
- Promotes and supports, both in and out of the classroom, the physical, emotional, spiritual, and psychological health of all students
- Nurtures students' creativity and varied talents; and leads to enriched lives of learning, leisure, solitude, leadership, and service.


## First-Year Experience Course

Every first-year student entering in the fall term must complete the First-Year Experience course offered by his or her academic division. This course will be offered for a minimum of one credit. The First-Year Experience course will not count against the seventeen credits per term limit covered by full-time tuition.

For first-year students entering the University in the winter term and for transfer students, each division will develop a plan to meet the goals of the First-Year Experience while serving the specific needs of these students.

The First-Year Experience courses offered by each division and units within divisions must include common elements as approved by the University. Beyond these common elements the divisions and academic units offering the course will have a great deal of flexibility in how the course is offered and what will be included in the syllabus.

## General Requirements

All bachelor's degrees granted by the University of Dayton require a minimum of 120 semester hours of credit with a cumulative grade point average of at least 2.0.

Specific requirements for the various degrees are listed under the schools granting the degrees. For more information, visit the sections on the four divisions.

One year (thirty semester hours) of residence is a minimum requirement for any bachelor's degree. The semester hour is the unit by which the University measures its course work, and the number of semester hours is determined by the number of hours a week in class and the number of weeks in the session. One semester hour is assigned to a class which meets fifty minutes a week over the period of one term.

Students enrolled in the University as candidates for degrees should not take courses at other colleges or universities without first obtaining written permission from their respective deans. If the permission is granted, the dean will request "transient status" for such students at designated institutions. The University reserves the right not to accept credits for such courses when this procedure has not been followed.

The Bachelor of Science in Education and Health Sciences may be awarded to holders of nonprofessional degrees from the University of Dayton with the completion of a minimum of thirty semester hours prescribed by the School of Education and Health Sciences beyond the requirements of the nonprofessional degree. The Bachelor of Arts or Bachelor of Science may be awarded to holders of professional degrees from the University of Dayton upon the completion of the requirements for such degrees. Any student wishing to obtain a second bachelor's degree may do so by completing the requirements for the second degree as determined by the faculty of the college or school in which this degree is offered.

Ordinarily a student who earned a first bachelor's degree or an associate degree at another institution must complete six semester hours of philosophy and/or religious studies at the University of Dayton. Such a student may be required to complete the prescribed twelve semester hours of philosophy and/or religious studies, if in the judgment of the dean, equivalent coursework had not been earned as a part of the program leading to the first degree.

All students following four-year programs are required to complete successfully the University requirements in Common Academic Program.

## Grade Appeals

Procedures for the appeal of grades differ for the College of Arts and Sciences and the Schools of Business Administration, Education and Health Sciences, and Engineering. The student should consult the appropriate dean's office for the grade appeal procedure which would apply to the student's discipline.

## Grades and Scholarship

Final grades are submitted at the end of the term, and these are made part of a student's permanent record in accord with the option chosen by the student. A progress report of every first-year student in each of the classes is submitted to the Registrar by every instructor at the middle of each term.

Undergraduate students are permitted a selection from two alternative grading options. The course grading options are as follows:

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## - Option 3-EM-Examination Credit

In addition to those courses which must be taken under Option 2, a student may take a maximum of fifteen semester hours under Option 2 within the hours required for graduation in the degree program. A student may take any course beyond the minimum hours required for graduation in the degree program under Option 2. All courses that are used to fulfill the Common Academic Program must be taken under Option 1. The college/school or department may place further restrictions on the use of Option 2. Exceptions to this policy may be made by the dean (or the dean's designee) of the college/school in which a student is enrolled. NOTE: Studies have shown that Satisfactory/No Credit grades (Option 2) on one's academic record may be a negative factor in the evaluation of application for transfer to some undergraduate schools, for admission to most professional schools (law, medicine, etc.) and many graduate schools, and for employment in some fields.

The official marks with their meanings and quality-point values are as follows:

- A - Excellent; for each semester hour, 4.0 quality points are allowed.
- A- - For each semester hour, $3.6667 q u a l i t y ~ p o i n t s ~ a r e ~ a l l o w e d . ~$
- B+ - For each semester hour, 3.3333 quality points are allowed.
- B - Good, for each semester hour, 3.0 quality points are allowed.
- B- - For each semester hour, 2.6667 quality points are allowed.
- C+ - For each semester hour, 2.3333 quality points are allowed.
- C - Fair; for each semester hour, 2.0 quality points are allowed.
- C- - For each semester hour, 1.6667 quality points are allowed.
- D - Poor but passing; for each semester hour, 1.0 quality point is allowed.
- F - Failed. This mark indicates poor scholastic work, or failure to report withdrawal from a course. In such cases, required courses must be repeated or retaken, preferably at the next opportunity.
-S - Satisfactory. This mark indicates credit given for a course taken under grading Option 2, C- or higher. The S credit shall be counted as hours only and shall not be considered in determining a student's cumulative point average.
- NC- No Credit. This mark indicates no credit given for a course taken under grading Option 2, below C-. In such cases, required courses must be repeated or retaken, preferably at the next opportunity.
- I- Incomplete. This grade indicates that the student has obtained the instructor's recommendation, subject to the chairperson's approval, to complete some portion of the work of the term that for reasons beyond the student's control was not completed before the end of the term, provided that the rest of the work has been of satisfactory grade. An I must be removed within thirty days from the date listed on the grade report, or it will be changed to an F or NC (option 2) on the student's permanent record. The time limit may be extended under exceptional circumstances, with the approval of the dean, if application for the extension is made within the thirty-day period noted.
- W- Withdrawn. During the first three weeks of a full term (or the first eight class days of a split term) a student may withdraw from a class without record by obtaining a drop (withdrawal) form from the Flyers Frist Office, having it signed by the academic advisor, and processing it. Beginning with the fourth week of the term and continuing through the fourth week after mid-term (or the ninth class day of a split term and continuing through the fourth week of the split term), a student may withdraw with a W by the same process, except that the drop form must have the approval signature of the instructor
as well as that of the advisor. For the remainder of the term, until the last day of classes, a student may withdraw with a W only by making a formal request to the dean, who consults with the student's instructor before granting such a request. During this period, a W will be permitted only for special nonacademic reasons. These include, but are not limited to, financial difficulties and matters of personal or family health. Documentation may be required. When a student finds it necessary to withdraw from the University, for any reason whatsoever, it is important that the dean be notified immediately. Financial adjustments, if allowed, will be made only from the date on the withdrawal form. Total withdrawal from all classes requires the processing of the drop form. This requires one signature from the student's Academic dean. It is the student's responsibility to initiate and process all withdrawals; the faculty do not initiate withdrawals for students except for auditors. In addition, the student is urged to process the withdrawal as soon as possible after deciding to drop a course. Students cannot assume that withdrawals are granted automatically if they stop attending class. Any failure to process the drop (withdrawal) form will incur a grade of $F$ for the course or courses involved. The F's so accumulated are always included in the cumulative grade-point average.
- IP - In Progress. This symbol is used in lieu of a grade for a course which has not terminated at the end of a term or summer session. A grade with corresponding credit and quality points (see grading Options 1 and 2) will be assigned when the course has been completed. Replaced "P" in September 2008.
- N- No grade was reported by the instructor.
- K- Credit. This mark is used only for credits accepted as transfer credit from other institutions. No quality points are allowed. K credit is not allowed for English courses taken at institutions in countries where the native language is other than English.
- X- Audit. This mark indicates that the student has registered to audit the course. No credit hours or quality points are awarded for this mark. Any course taken for audit may not be retaken for credit. If, in the opinion of the instructor, a student has not attended and participated in a sufficient number of classes, the instructor will assign a W.
- R- Retaken. An undergraduate student who receives a grade of $D$ or F in a course taken under Option 1 at the University of Dayton may retake that course under Option 1 at the University of Dayton and remove the original $D$ or $F$ from the cumulative GPA. When a course has been retaken and the subsequent grade is higher than or equal to the previous grade, the previous grade will not count towards the student's cumulative GPA. The transcript will reflect this event by noting the original grade with an "E" (Grade Excluded) and the term and cumulative GPA's will be adjusted. A student may have no more than 15 semester hours of "retaken" grades. Cumulative grade point averages will reflect the changes within 30 days after the grades are posted.

If a student retakes a course in which the topics vary, it must be demonstrated that the retaken course contains the same material as the original course in which the student received a D or F. Courses taken by students prior to the initiation of this policy, and before completion of an undergraduate degree, may be retaken within the guidelines of this policy.

Exceptions to this policy may be made by the dean (or the dean's designee) of the school or college in which the student is enrolled.

Addendum to Retake Policy

When a student retakes a course which he or she has taken more than once previously, the retaken course will serve to replace both previous grades (if it is the same as or higher than each). The number of "retaken hours" will be counted as the total hours for the two courses in which the grades are replaced; e.g., if a student retakes PSY 101 in which he or she had previously earned F two times, the new passing grade will replace both Fs, but will count as 6 credit hours taken instead of 3 . This student will then be able to take up to 9 additional course grades.

## EM- Examination

This mark indicates University of Dayton credit given to a student on the basis either of the Advanced Placement Program of the CEEB or of examinations taken prior to or after admission to the University. The required level of achievement on these examinations is determined by the department in which the course is taught. This credit shall be assigned only on authorization of the registrar. No quality points are allowed. A student must be registered at the University of Dayton to obtain credit. EM credit is limited to 24 semester hours (exclusive of AP and CLEP General Examination credits).

No grade changes of any kind is permitted after thirty days from the date listed on the grade report.

The University reserves the right to change the grading system.

## Grade-Point Averages

Semester Grade-Point Average:
Is the total number of quality points divided by the number of semester credit hours carried by the student under Option 1.

Cumulative Grade-Point Average:
Is the total number of cumulative quality points divided by the number of cumulative credit hours carried by the student under Option 1. If a course is repeated, the grade points for both the original grade and the new grade are computed. If a course is retaken (see R) and the subsequent grade is higher than or equal to the previous grade, the previous grade will not count towards the student's CGPA henceforth. Marks of I, K, N, IP, S, W, X, NC, and EM are disregarded in the computation of the CGPA.

Cumulative Academic Unit Grade-Point Average:
Includes only those courses completed at the University of Dayton and required for the specific degree obtained and/or approved for inclusion by the student's school or college.

## Honors

1. To graduate with honors, a student must have completed a minimum of 60 semester hours at the University of Dayton and have an academic degree program grade-point average at the University of Dayton of 3.50 or higher, based on a 4.00 scale. The academic degree program grade-point average includes all courses taken at the University of Dayton under grading Option 1 and accepted as graduation credits by the student's academic unit, i.e. school or college. Determination of a student's initial honors category recognized in the graduation program is made on the basis of the student's academic record at the conclusion of the term preceding the
student's last term at the University or on the basis of the student's academic record at the conclusion of his or her last term.
2. If a student qualifies for honors or moves into a different category of honors on the basis of his or her academic degree program gradepoint average, the diploma issued will note the appropriate honor category and notation will be made on the transcript and permanent record. Due to time constraints no adjustments/corrections can be made to the actual printed graduation program.
3. Honors status will be determined by the academic degree program grade-point average and will include only those courses completed at the University of Dayton. Students who transfer to the University of Dayton under the terms of an articulation agreement with a community college may be eligible for honors at graduation even if they have not completed the minimum of 60 semester hours at the University provided that they have met all terms of the articulation agreement.
4. The notation of honors is made in the commencement program, on the diploma, on the student's permanent record, and on the transcript, as follows:

- Cum Laude- if the academic degree program grade point average is greater than or equal to 3.50 but less than 3.70
- Magna Cum Laude- if the academic degree program grade point average is greater than or equal to 3.70 but less than 3.90
- Summa Cum Laude- if the academic degree program grade point average is greater than or equal to 3.90

5. Any exceptions to this procedure are the decision of the dean of the student's academic unit.

## Transfer Policies

## Transfer of Credit Policy

All transfer coursework completed by current UD students for UD credit must be approved in writing by the Dean's office prior to registration for the course. At a minimum, the approval process will include a review of the institution, course descriptions and course syllabus. Additionally, a vita of the professor and/or a copy of the textbook used in the course may be reviewed. Consideration for credit will only be given to transfer courses with a grade of C - or better.

Courses taken in the U.S. must be completed at a regionally accredited institution. Courses taken in a foreign country must be completed at an institution recognized by the foreign country's minister/head of education. Official transcripts must be sent directly to UD from the university and must contain an official seal of the university's office of academic affairs. Other requirements may be necessary (i.e. School of Business courses need to be taken at an AACSB accredited institution) given the specific course in question.

No credit will be granted when a student fails to receive prior written approval from the Dean's office or fails to provide official transcripts sent to UD directly from the approved university.

## Internal Transfer Policy

Any undergraduate student having completed one academic semester in good standing at the University of Dayton may initiate a request for Internal Transfer. The student desiring to change his/her major can initiate this process by contacting their advisor and submitting a formal transfer application prior to registration.

To be considered for Internal Transfer the student must meet the following criteria:

- College of Arts \& Sciences

Cumulative GPA:
1.7 end of first term
1.7 end of second term
1.8 end of third term
1.9 end of fourth term
2.0 thereafter

- School of Business Administration

Students must first attend an initial internal transfer meeting with an Academic Advisor in the School of Business Administration. Stop in the Center for Academic Success in Miriam Hall 108 to schedule this initial SBA internal transfer meeting. Minimum Requirements: Cumulative GPA of 2.7, successful completion of an appropriate UD Math course, such as Calculus class, a C+ or higher in MTH 116 or MTH 128, or a B- or higher in MTH 207. Math courses taken at another college or university will NOT be considered.

- School of Education and Health Sciences

Cumulative GPA of 2.75 or better, and for those seeking teacher licensure, proof must be submitted of satisfactory standardized testing scores.

- School of Engineering

Cumulative GPA:
1.7 end of first term
1.7 end of second term
1.8 end of third term
1.9 end of fourth term
2.0 thereafter

Units will review applications for transfer and make decisions in a timely fashion with communication to the student, the appropriate units, and the Registrar. Please note: there are times when the student's desired transfer would not be recommended. This decision will be left to the judgment of the dean or his/her designated representative.

More complete information regarding Internal Transfer to the College or schools may be obtained in the respective dean's office.

## Non-Disability Related Course Waiver Policy

Students may make a request to their department or dean to waive certain required courses. In such cases, students may be required to submit proof of prior knowledge in the subject area (diplomas, certificates, portfolios, auditions, transcripts, etc.). At the request of the dean's office or department, students may be asked to complete departmental exams or to submit additional documentation and records of consultation.

Waiving a course does not confer credit. Students replace a required course (the one which has been waived) with another course that carries the same or more number of credit hours and is at an equal or higher course level. Determination of the appropriate course must take place in consultation with the department and dean's office. This policy applies to all waived courses, including those waived by means of placement exams. In addition, this policy does not apply to students with disabilities who require a course substitution due to a disability. Students with disabilities should consult appropriate university policy for course substitution due to disability.

Any exceptions to this policy are made at the discretion of the appropriate Dean's office.

## Student Records

The Family Educational Rights and Privacy Act of 1974 (FERPA) is a federal law which states that an educational institution must establish a written institutional policy concerning the confidentiality of student education records and that students must be notified of this statement of policy and their rights under the legislation. In accordance with the Act, students and parents of dependent students at the University of Dayton have the following rights:

1. The right to inspect and review educational records covered by the Act or personally identifiable information contained therein.
2. The right to challenge the contents of these records.
3. The right to a formal hearing, if necessary, for a fair consideration of such a challenge.
4. The right to place an explanatory note in the record in the event that a challenge of contents is unsuccessful.
5. The right to control, with certain exceptions, the disclosure of the contents of the records.
6. The right to be informed of the existence and availability of the institutional policy covering FERPA rights.
7. The right to report violations of FERPA legislation to the Department of Education.

A complete policy statement on student records in accordance with the requirements of FERPA can be found in the student handbook, published by the Office of Student Development. Copies of the policy also are available at the following University offices: Vice President for Student Development and Dean of Students, Provost, and Registrar.

## The Academic Honor Code

## I. Introduction

As a Marianist, Catholic university committed to the education of the whole person, The University of Dayton expects all members of the academic community to strive for excellence in scholarship and in character. As stated in the University's Student Handbook, "The University of Dayton expects its faculty and administration to be instrumental in creating an environment in which its students can develop personal integrity."

To uphold this tradition, the University community has established an academic honor code for all of its students, except Law students who are governed by The University of Dayton School of Law Honor Code. Students are expected to be aware of and abide by the honor codes.

## II. The Honor Pledge

The University of Dayton Academic Honor Code: A Commitment to Academic Integrity

I understand that as a student of the University of Dayton, I am a member of our academic and social community, I recognize the importance of my education and the value of experiencing life in such an integrated community, I believe that the value of my education and degree is critically dependent upon the academic integrity of the University community, and so

In order to maintain our academic integrity, I pledge to:

- Complete all assignments and examinations according to the guidelines provided to me by my instructors,*
- Avoid plagiarism and any other form of misrepresenting someone else's work as my own,
- Adhere to the Standards of Conduct as outlined in the Academic Honor Code.

In doing this, I hold myself and my community to a higher standard of excellence, and set an example for my peers to follow. Instructors shall make known, within the course syllabus, the expectations for completing assignments and examinations at the beginning of each semester. Instructors shall discuss these expectations with students in a manner appropriate for each course.

* The term instructor may refer to any faculty or staff member


## III. Standards of Conduct

Regardless of motive, student conduct that is academically dishonest, evidences lack of academic integrity or trustworthiness, or unfairly impinges upon the intellectual rights and privileges of others is prohibited. A non-exhaustive list of prohibited conduct includes:

## A. Cheating on Exams and Other Assignments

Cheating on examinations consists of willfully copying or attempting to consult a notebook, textbook, or any other source of information not authorized by the instructor; willfully aiding, receiving aid, or attempting to aid or receive aid from another student during an examination; obtaining or attempting to obtain copies of any part of an examination (without permission of the instructor) before it is given; having another person take the exam; or any act which violates or attempts to violate the stated conditions of an examination. Cheating on an assignment consists of willfully copying or attempting to copy all or part of another student's assignment or having someone else complete the assignment when class assignments are such that students are expected to complete the assignment on their own. It is the responsibility of the student to consult with the instructor concerning what constitutes permissible collaboration and what materials are allowed to be consulted.

## B. Committing Plagiarism and Using False Citations

Plagiarism consists of quoting or copying directly from any source of material without appropriately citing the source and identifying the quoted material; knowingly citing an incorrect or fabricated source; or using ideas (i.e. material other than information that is common knowledge) from any source of material without citing the source and identifying the borrowed material. Students are responsible for educating themselves as to the proper mode of attributing credit in any course or field. Instructors may use various methods to assess the originality of students' work, such as plagiarism detection software.

## C. Submitting Work for Multiple Purposes

Students are not permitted to submit their own or other's work (in identical or similar form) for multiple purposes without the prior and explicit approval in writing of all instructors to whom the work will be submitted. This includes work first produced in connection with classes at the University of Dayton as well as other institutions attended by the student or at places of employment.

## D. Submitting False Data or Deceptive Information

The submission of false data is a form of academic fraud. False data is that which has been fabricated, altered, or contrived in such a way as to be deliberately misleading or to fit expected results. Deception is defined as any dishonest attempt to avoid taking examinations or submitting assignments at the scheduled times by means such as a forged medical certification of absence. Deception also includes falsifying class attendance records or failing to reveal that someone falsified your attendance. Extenuating circumstances such as a personal illness, death in the family, etc. must be negotiated with the instructor.

## E. Falsifying Academic Documentation and Grade Alteration

Any attempt to forge or alter academic documentation (including transcripts, letters of recommendation, certificates of enrollment or good standing, and registration forms) concerning oneself or others also constitutes academic fraud. Grade alteration consists of an act which dishonestly modifies a grade obtained for a class assignment, examination, or for the course itself.

## F. Abuse of Library Privileges and Shared Electronic Media

All attempts to deprive others of equal access to any library materials constitute a violation of academic integrity. This includes the sequestering of library materials for the use of an individual or group; a willful or repeated failure to respond to recall notices; and the removal or attempt to remove library materials from any University library without authorization. Defacing, theft, or destruction of books, articles or any other library materials that serve to deprive others of equal access to these materials also constitute a violation of academic integrity. Malicious actions that deprive others of equal access to shared electronic media used for academic purposes constitute a violation of the Honor Code. This includes efforts that result in the damage or sabotage of campus computer systems.

## G. Encouragement or Tolerance of Academic Dishonesty

The quality of campus and community life is dependent upon the commitment of each member of the University to a shared set of behavioral standards and values. Adhering to the Academic Honor Code is not limited to direct actions, but also includes any behavior that supports, encourages, or tolerates academic dishonesty.

## IV. Student Status with Respect to the Academic Honor Code

A. All University of Dayton students, except for Law students who are governed by The University of Dayton School of Law Honor Code, are subject to the Standards of Conduct and procedures of the Academic Honor Code
B. Normally, the maximum penalty for a single proven case of academic dishonesty is an F in the course. No provision can then be made for the student to receive a W. Under some circumstances, such as repeated offenses, theft, intimidation, or breaking and entering, additional penalties may be imposed by the University. These penalties may include dismissal from the major, dismissal from the school or college, removal from the University Honors Program, or dismissal from the University.
C. All honor code violations, as determined by the instructor after consultation with the student, require that the chair of the department or program director in which the incident occurred be notified of the violation by the instructor. If a student accepts the instructor's accusation and/ or penalty, the case will be considered resolved and no further action shall be required. The instructor shall send an Academic Dishonesty

Incident Report form to the dean(s) of the student's academic unit(s) - possible double major. If a student does not admit the violation or accept the proposed penalty, the student may contact the chair or program director in which the incident occurred and initiate an appeal process. If the appeal is decided in favor of the student, no report will be placed in the student's file. If during the appeal process the student is found responsible, the report will be placed in the dean(s)' offices of the student's academic unit(s) - possible double major. If the student transfers between academic units, all reports will be transferred to the new dean's office.
D. If a possible violation is reported after the grade for a course has been submitted, the case will be adjudicated only if the Office of the Provost determines that the alleged offense is of sufficient gravity to warrant consideration. Only matters that could reasonably result in sanctions reflected in a student's permanent record will ordinarily meet the "sufficient gravity" test in this context. The Office of the Provost shall decide on the process of adjudication
E. If a student with a possible violation withdraws, transfers, or is, for any reason, not currently enrolled at the University the University may maintain a continuing interest in, and complete the adjudication of the matter, if, in the judgment of the Office of the Provost, the matter is of sufficient gravity to warrant resolution. The Office of the Provost shall have the discretion to determine whether the adjudication will occur before or after the student's re-enrollment, and the process of adjudication.
F. A student may not graduate with an unresolved Academic Honor Code violation which, in the judgment of the Office of the Provost, is of sufficient gravity to warrant resolution. Certification for the degree will be withheld pending a final resolution of the Academic Honor Code matter. The Office of the Provost shall decide on the process of adjudication
G. If a violation is reported after a student has graduated, transferred, or otherwise terminated his or her enrollment at the University, the case will be adjudicated only if the Office of the Provost determines that the case is of sufficient gravity to warrant consideration. The Office of the Provost shall decide on the process of adjudication. In a case involving a student who has already received a degree, sanctions up to and including the revocation of a degree or certificate are possible. The Office of the Provost has the final authority to revise and implement any sanctions.

## V. Appeal Procedure

A student who believes an accusation of academic honor code violation or penalty is not valid may appeal in the sequential manner listed below. If the student does not appeal the decision of the instructor, or accepts the accusation and penalty at any time during the appeal process, the Academic Dishonesty Incident Report form shall be sent to the student's dean(s) by the instructor.
A. If no resolution occurs in the private conversation with the instructor, the student may appeal to the department chair or program director in which the incident occurred. The student must submit a written account, including a detailed explanation of their actions, along with any circumstances concerning the incident. This appeal must be made within ten business days after meeting with the instructor. The chair may use reasonable means, including meeting with the instructor and student, to reach a determination on the accusation and/or penalty within thirty business days.
B. If no resolution occurs with the department chair or program director, the student has ten business days to file a written appeal to a review
committee formed by the department chair or program director in which the incident occurred. The review committee shall be composed of at least two tenured faculty and one student. The review committee will first select a chair, and then meet with the student and instructor involved on separate occasions and gather any additional evidence or information related to this appeal. The student has the right to see and hear the evidence, to question any witnesses against the student, and to present evidence and witnesses on the student's behalf. Both the student and the instructor must cooperate with the review committee. The review committee shall make known its recommendations and the reasons for its recommendations in writing to the department chair or program director, the student, and the instructor within thirty business days.
C. If the student or faculty member disagrees with the review committee's decision, either may then make an appeal to the dean of the unit in which the incident occurred. The dean must make known his or her decision, and reason(s), in writing to the student, the instructor, chair or program director, and department review committee within thirty business days.
D. A final appeal may be made to the Provost within ten business days after the dean's decision. The Provost must make known his or her decision, and reason(s), in writing to the student, the faculty member, chair or program director, dean, and review committee within thirty business calendar days. The final authority rests with the Provost.

Academic Dishonesty Incident Report (catalog.udayton.edu/ undergraduate/generalinformation/academicinformation/ theacademichonorcode/Academic_Dishonesty_Incident_Report.pdf)

## Transcripts

A transcript of the permanent academic record is a confidential document to be released in compliance with the regulations of the Family Educational Rights and Privacy Act of 1974 as amended. The Registrar will issue transcripts upon a request signed by the student provided that no outstanding financial obligation to the University exists. All transcripts so requested require payment in advance. A complimentary transcript certificate will be given to each graduate when the official diploma is issued. For more information please visit: http://www.udayton.edu/ flyersfirst.

## Undergraduate Students in Graduate Courses

An undergraduate student may register for graduate courses only under the following conditions:

1. Graduate courses to count toward the undergraduate degree: a. Approval must be obtained from the director of the appropriate graduate program.
2. Graduate courses to count toward the graduate degree:
a. Approval must be obtained from the director of the appropriate graduate program.
b. Unless the student has been accepted into a combined baccalaureate/master's degree program, the student must be within 15 semester hours of completing the semester-hour requirements for graduation in the undergraduate program.
c. Credit obtained for the graduate courses may not be counted toward both the bachelor's degree and any future master's degree unless the student has been admitted to a combined Bachelors + Masters program.
d. The undergraduate student whose status is less than full-time or 3/4-time must pay the graduate tuition rates to register in graduate courses for graduate credit.

## Libraries and Research Services

The University Libraries are comprised of:

- Marian Library (p. 51)
- Roesch Library (p. 51)
- School of Law Library (p. 51)

Also in this section:

- Access to Other Resources (p. 50)
- International Marian Research Institute (IMRI) (p. 50)
- Literature Searching (p. 51)
- Research Institute (UDRI) (p. 51)
- School of Education \& Health Sciences Curriculum Materials Center (p. 51)


## Access to Other Resources

The University Libraries are part of Ohio's OhioLINK project, linking the library resources of over 80 of Ohio's public and private academic and public libraries, and the State Library of Ohio. A delivery system among these institutions provides rapid delivery of requested materials, usually within three days. The library is an associate member of the Center for Research Libraries, giving it access to hundreds of additional specialized collections. The library is an active member of the Library Division of the Southwestern Ohio Council for Higher Education, which furthers access to regional libraries. Graduate students also have direct, on-site borrowing privileges with all OhioLINK libraries and with nearly all of the Southwestern Ohio Council for Higher Education libraries.

## International Marian Research Institute (IMRI)

Johann G. Roten, S.M., Program Director

The Marian Library/International Marian Research Institute is recognized as the largest and most comprehensive collection of materials on the Virgin Mary and as a leading center for Marian studies. Established in 1943 by the Marianists at the University of Dayton, the Marian Library comprises over 100,000 books and pamphlets which include theological, Scriptural and ecclesial documents and commentaries, biographies of Marian devotees, sermons, and Marian art. It also has collections of postcards, religious images, postage stamps, medals, rosaries, Christmas créches, and recordings of Marian music.

A principal mission of the Marian Library is to promote research in Marian studies. The International Marian Research Institute was founded in 1975 (in affiliation with the Pontifical Theological Faculty Marianum in Rome) offering an academic program leading to the licentiate (S.T.L.) and the doctorate (S.T.D.) in theology; the master's degree in religious studies with a Marian concentration (in conjunction with the Department of Religious Studies of the University of Dayton); a certificate in Marian studies; and a guided program of studies. The academic program is organized in a three-year cycle and serves a diverse, international student population: laity (men and women), priests, and religious. While most students seek the degree in theology with specialization
in mariology, others simply wish to satisfy personal interests in Marian studies.

The Marian Library provides exhibits of Marian art, reference services, circulation of books and videos, conferences and workshops. Four publications originate at the Marian Library: Marian Library Studies, a scholarly journal of original research; Marian Studies, the journal of the Mariological Society of America; the Marian Library Newsletter, which covers current books and topics of interests; and Art and Spirituality, a series of monographs promoting personal meditation through religious art.

The Marian Library maintains the Mary Page (http://www.udayton.edu/ mary) with extensive resources: information on art exhibits and classes, Marian ecclesial documents, FAQs, and seasonal meditations.

## Literature Searching

Roesch Library subscribes to over 200 databases. These provide information in every area of study offered by the University. Most are available both on and off campus. The library also has access to several hundred additional databases from a variety of commercial database providers. Librarians work with graduate students and faculty to search these resources when appropriate. There is no charge for this service.

## Marian Library

The Marian Library, located on the seventh floor of the Roesch Library, houses the world's largest collection of published materials on the Virgin Mary. Its comprehensive collection is devoted to information about and references to the Virgin Mary found in works of Scripture, doctrine, history, tradition, art, culture, spirituality, and devotion. The multilanguage collection includes over 95,000 books and pamphlets (6,000 of which were printed before 1800), 165 periodicals, a clipping file of over 60,000 items, and a growing number of microforms. These works are supplemented by a Marian stamp collection, Christmas créche collection, statues, medals, postcards, and other works of art. Publications include Marian Studies (papers given at the annual meeting of the Mariological Society of America), Marian Library Studies (original research on Marian topics), and the twice-yearly Marian Library Newsletter. The Marian Library's collections can be accessed via the University Libraries' online catalog. Hours, an explanatory video, and information on current art exhibits can be found on the Mary Page (http://www.udayton.edu/mary/ library).

## Research Institute (UDRI)

The University includes research as one of its stated purposes. In addition to faculty members in academic departments, a large staff of research scientists, engineers, and technicians conduct basic and applied research. Most of these activities are externally funded and are conducted in the laboratories of the University of Dayton Research Institute.

Several hundred students are employed in research programs in accord with the University's emphasis on integration of research and instruction. In addition to financial benefits, this research participation provides students with valuable experience and an exposure to issues at the forefront of contemporary science and engineering.

## Roesch Library

Roesch Library has over 1 million print and electronic books and access to over 68,000 print and e-journals. The library is open 127 hours a week throughout much of the academic year and 24 hours per day during final exams. Research assistance is provided in a variety of forms at the Information or Research Help desks including email, IM, text, and telephone. Roesch Library provides computers, printers, copiers and scanners as well as cameras and Kindle e-book readers to borrow. Study spaces have moveable chairs and tables. On the first floor groups may connect laptops to widescreen monitors for easy collaboration. Individual and group study rooms are also available. All floors provide wireless network access for students working on laptops or mobile devices. The Libraries are one of the founding members of OhioLINK, a consortium of Ohio libraries that share resources and provide rapid access to and delivery of over 46 million items available at college and university libraries across the state. Access to the Libraries' Web page, databases, and online catalog (http://udayton.edu/libraries).

## School of Education \&Health Sciences Materials Center

The Brother Louis J. Faerber, S.M., Curriculum Materials Center (CMC) houses the SEHS's specialized education collections and is located in Chaminade Hall. Its collection includes professional education books and journals, children and young adult literature, elementary and secondary textbooks, standardized assessments, teaching aids (games \& manipulatives), DVD's, CD's, videocassettes, audiocassettes, LP records, charts, material kits, and other resources. The CMC also houses research projects, theses, and dissertations completed for the SEHS's respective graduate programs. A copier, four networked computer workstations, the Ellison Press, Accu-Cut Machine, and an assortment of letter and shape dies are available for student use.

## School of Law Library

The University of Dayton School of Law Library is located in Joseph E. Keller Hall. Its collection contains over 181,000 volumes and 68,000 physical units of microforms. The open-stack arrangement of the Law Library permits easy access to all materials.

## Interdisciplinary, Experimental and Special AreasUndergraduate

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## Adult Degree Advancement Program (ADAP)

Specifically designed for students 24 years of age and older who wish to attend college part-time, the University of Dayton Adult Degree Advancement Program (ADAP) allows you to complete your bachelor's degree at a pace that fits nicely with your lifestyle. Day and evening classes are available. Tuition for the ADAP students is very affordable, with cost per credit hour comparable to other adult degree programs.

ADAP students can select from one of six bachelor degree programs:

- Communication Management
- Psychology
- General Studies
- Engineering Technology
- ADA Didactic Program in Dietetics and Early Childhood Education

Information regarding Communication Management, Psychology, and General Studies can be obtained from the College of Arts and Sciences, 937-229-2604. Information regarding the Engineering Technology program can be obtained from the Department of Engineering Technology, 937-229-4216. Information regarding the School of Education and Health Sciences programs can be obtained from the Department of Teacher Education, 937-229-3372, or the Department of Health and Sport Science, 937-229-4203.

## Air Force Reserve Officers Training Corps (AFROTC)

Air Force Reserve Officers Training Corps (AFROTC) is designed to create future leaders for the United States Air Force. The program is based out of the host school at Wright State University but classes are conducted on the University of Dayton campus to alleviate any transportation concerns. A wide range of scholarships-to include full tuition-are available to qualified students. For more information contact the Air Force ROTC Detachment located in Millett Hall, room 118, at Wright State University or phone (937) 775-2730 or e-mail, afrotc@wright.edu.

## Cooperative Education (COP)

Cooperative education is an optional plan of full-time, on-campus study alternating with terms of full-time, off-campus paid work experience in industry, business, or government. Among the expected benefits to the student are on-the-job experience, career identification, financial assistance, and professional development. The work terms average seventeen weeks. Three full work terms are considered minimum for the program. Students are encouraged to begin their first co-op work experience after their third or fourth semester of academic study.

Placement in a job is not guaranteed since it depends on the student's qualifications and on the availability of jobs.

## College of Arts and Sciences \& School of Business Administration

Cooperative Education is open to all students in the College of Arts and Sciences and the School of Business Administration. These students may start the application process by making an appointment with a career services professional. Further information on the cooperative education program for arts, science, and business students may be obtained by contacting Career Services, University of Dayton, Dayton, OH 45469-2711; phone (937) 229-2045; website (http://careers.udayton.edu).

## School of Engineering

Qualifications for entering and remaining in cooperative education are (1) to be admitted to the University as a full-time undergraduate student with a minimum cumulative grade point average of 2.3; (2) to have a declared major in one of the academic departments in Engineering or Engineering Technology; (3) to maintain good academic standing as specified by the particular academic department; (4) to engage in full-time study and make progress toward the degree during each study term following each full-time work training term.

Incoming sophomore, junior level, or transfer students interested in cooperative education should attend one of the seminars held in September and January of each year. After each Co-op New Student Seminar, such students may begin the process of entering the program, which includes registering through the Hire a Flyer network and having an initial interview with a member of the co-op staff. Those who start as firstyear students at the University are eligible for placement after completing three terms of full-time study on campus. Transfer students, whether from two-year or four-year institutions, must spend one full-time study term on campus after transferring before becoming eligible for the first work term.

Further information on the engineering cooperative education program may be obtained by contacting Cooperative Education, School of Engineering, University of Dayton, Dayton, OH 45469-0227; phone (937) 229-2335; website (http://engineering.udayton.edu/careers/coop.asp).

## Core Programs

The University of Dayton's Core Program offers an innovative, interdisciplinary curriculum program consisting of a sequence of courses that fulfill many of the University's Common Academic Program Requirements. These courses address a common theme, "Human Values in a Pluralistic Culture," and are carefully coordinated with one another so that students experience the integrated character of the liberal arts. Extra-curricular speakers, arts events, and other activities related to course content are an important part of the program.

Core accepts approximately 150 students each year, representing all of the University's four undergraduate schools -- the College of Arts and Sciences, the School of Business Administration, the School of Education and Health Sciences, and the School of Engineering. All entering firstyear students are invited to apply; students in some majors in the College of Arts and Sciences are enrolled automatically. Core is designed to deepen the learning experience of any interested University of Dayton student. While Core is not an accelerated or honors program, students can earn credit toward the Honors Program with Core courses.

## Distance Learning Courses

The University of Dayton offers a select number of distance learning courses that can be taken as requirements for a major, a minor, or as electives. Unless otherwise stated, these are offered by University of Dayton academic departments that deliver undergraduate programs and are fully-accredited. The choices of distance learning courses available each semester varies, but is listed in the course composite for that semester. Selection of courses should be made by students in consultation with their academic advisor. Commonly students complete distance learning courses during the summer, to help accrue academic credit while living and working from home. Details about the courses should be sought from the academic department offering the course and the instructor of that course. In general most of these courses require Internet connectivity and utilize a number of online learning methods. Students should check what the requirements for each distance learning course are, how it relates to their major, and when and how the course begins. For additional information about UD's distance learning courses and programs, and how to be successful in the online learning environment, visit http://learn.udayton.edu.

## Education Abroad

The Education Abroad office, located in the Center for International Programs, guides students pursuing an educational experience outside the United States. Whether the student wishes to attend a program through the University of Dayton or through another institution, our education abroad staff assist with the application process and prepares students through a pre-departure orientation. The education abroad staff also offer a re-entry program to students returning to the U.S.

A variety of international education programs are available through the University of Dayton, including summer, semester and full-year study abroad programs; international service opportunities and work experiences; and intercultural programming.

## Summer Education Abroad - Interdisciplinary

The University Summer Study Abroad Program, offered through the Center for International Programs (CIP), is a unique study and travel experience. Students choose from eight to twelve sites during the months of May, June and July, and spend approximately three to five weeks at each program site. While abroad, students select courses from a variety of disciplines and use on-site resources to guide and enhance their learning experience. Typically, courses are taught by University of Dayton professors. By choosing to study at two sites, students can earn up to a full semester of credits. Past sites have included Athens, Dublin, Florence, London, Madrid, Paris, Rome and Shanghai.

## Summer Education Abroad - Disciplinary

Summer education abroad programs which are specific to one area of study are also offered on a regular basis. Summer 2012 options included programs for business, communication, and psychology.

Language majors or minors can develop their spoken and written foreign language skills through summer language immersion programs. Students can improve their foreign language skills while integrating personal experiences and discoveries with material discussed in class lectures. University of Dayton professors design the courses to incorporate contemporary use of the language and explore the culture, government, and history of the city and nation in which they are teaching.

## Semester/Academic-Year Education Abroad

The University of Dayton has developed partnerships and participates in exchange agreements with several overseas institutions. In addition to University of Dayton tuition, students are responsible for their room and board in the host country, international travel, and personal expenses. Most financial aid (including institutional scholarships and grants) applies to exchange programs. For the most current list of partners, visit the website (http://www.udayton.edu/international/university_initiatives/ partners.php).

## Other Opportunities

University of Dayton students can study abroad in many countries through other U.S. colleges and universities, and study abroad organizations or overseas universities. In addition to tuition, students are responsible for room and board in the host country, international travel, and personal expenses. Aid for non-University of Dayton sponsored programs is limited to federal loans and grants. Through these programs, University of Dayton students can study in Argentina, Australia, Austria, China, Costa Rica, the Czech Republic, France, Hungary, Ireland, Italy, Mexico, Poland, Russia, South Africa, Spain, the United Kingdom, and many other countries.

## Service Abroad

The Center for Social Concern offers opportunities for students to combine service-learning with their education abroad experience. The International Summer Immersion programs introduce students to the country's way of life through job placements, interaction with host families and travel through the country. Past destinations have included India, Cameroon, and Guatemala. The Center for Social Concern also coordinates week-long international service programs during the University's winter break.

ETHOS offers various service opportunities in cities within Latin America, Africa, India, China, and Bangladesh, as well as domestic placements. Through ETHOS International Service Learning Placements, students participate in an 8 - to 16 -week service-learning internship. These internships involve working with NGOs or cottage industries doing engineering- and/or business-related work. The program is operated through the School of Engineering and open to both engineering and business majors. Students from other majors may participate by permission.

## Release Agreement and Travel Registration

All students participating in a university-sponsored international program must complete the Release and Agreement Form which releases the University from liability for claims including, but not limited to, injury, delay, and damage while abroad. As part of this agreement, the student agrees to abide by the University's standards of behavior while in the host country or countries. Students are also required to complete: the Health Information and Emergency Treatment Authorization Form which requests medical information; and the Behavioral Contract which outlines the institution's expectations for behavior while abroad. Depending on the program, students may need to complete the Authorization Form in order to transfer academic credit earned as part of a study abroad program to the University of Dayton.

Additionally, all University of Dayton students participating in a universitysponsored international program are required to complete the online Travel Registry as part of their pre-departure requirements. The University-wide travel registry allows the University to remain in close contact with students, should they need assistance while abroad. In addition to the Travel Registry, all students participating in an individual
exchange or non-University-sponsored program are required to register with the U.S. State Department.

## International SOS

The University of Dayton has contracted with International SOS (SOS) to provide worldwide medical, travel, and security assistance and evacuation services for all faculty, staff and students participating in university-related international travel. Services include up-to-date reports on safety and security, health issues, medical referrals, and vaccination requirements for individual countries. SOS offers our students travel, medical, and security advice and services and protects against a variety of difficulties that could arise while abroad; however, the SOS is NOT health insurance. The University of Dayton continues to require all students studying abroad to maintain health insurance coverage and to make certain that their policies cover them while abroad.

## High Risk Travel

The University will suspend all University-sponsored and organized instructional programs in countries or specific areas within countries for which the Department of State (DOS) has issued a Travel Warning or the Center for Disease Control (CDC) has issued a Travel Health Warning. If a warning is issued after the program is underway, the University's International Response Team (IRT) will review each situation on a case-by-case basis to determine the appropriate course of action. Refunds will be evaluated on a case-by-case basis and may depend on specific service-provider refund policies.

For individual travel by students who have University funding to pursue research, study or other University-related business in countries or specific areas within countries for which the DOS has issued a Travel Warning, or the CDC has issued a Travel Health Warning, the University will not provide funding for undergraduates. Also, the University will not provide support for faculty, staff, or graduate/professional students in a country where a mandatory evacuation order has been issued. The University will review on a case-by-case basis requests for waivers (see waiver requests below).

If a warning is issued after the program is underway, the University will review each situation on a case-by-case basis to determine the appropriate course of action. In general, the University will not require the traveler to reimburse already expended funds. However, the University reserves the right to terminate remaining funding. Should a traveler have concerns and decide to return home based on lower-level travel warnings, the University will not require the traveler to reimburse expenses already incurred.

Travel Waiver Requests: Requests for a travel waiver will be considered under limited circumstances. Waiver requests should be submitted to the Center for International Programs and include a description of the learning, service, and/or research objectives of the trip; the importance of the program to the educational, research, service, or professional development of the group or individual; the political and physical conditions at the proposed site that could impact health and safety; the level of risk to the individual or group health and safety, including the traveler(s) knowledge of the area and conditions; a description of travel conditions within the country and an evacuation plan should it become necessary; and a signed High Risk Travel Waiver/Release for each traveler.

In addition to review of the warnings in question and the required waiver, the University's CIP will seek to obtain information regarding the actions of U.S. companies and organizations in country. The CIP will also consult with relevant country experts at International SOS or other relevant
organizations in country to obtain additional information and advice on the situation. IRT members will have the opportunity to review the waiver application along with the additional information collected by the CIP and provide input. An IRT waiver review subcommittee will make the final decision regarding travel waivers. There is no appeal process for waivers that are denied.

## University of Dayton's Foreign Liability Insurance - Excluded Countries

The University's commercial insurance carrier's foreign liability policy excludes some countries from the "coverage territory". Check with the CIP for a complete and up-to-date list of excluded countries.

In order for the third party insurer to consider these countries as coverage exclusion exceptions, travelers must submit to the Center for International Programs the following at least one month in advance of travel: name(s) of traveler per trip to each country; defined secured evacuation plans; preferred travel/logistical arrangements; trip purpose to travel in these countries; signed high risk travel waiver/release. The CIP will send this information to the Chair of the University of Dayton Insurance Review Committee who will seek a response from the insurance provider. The decision will be communicated to the travelers.

## Experiential Education Programs (EXP)

Experiential Learning is an optional part-time or full-time internship work experience, either paid or unpaid, in industry, business, or government directly related to a student's major or career path. Among the expected benefits to the student are on-the-job experience, career exploration or identification, financial assistance, and professional development. The work terms can be part-time during semesters while attending classes and/or full-time during semesters not taking classes. Students may begin an Experiential Learning internship work experience as early as the summer after their first year of study. Jobs may be found with the assistance of Career Services through Hire a Flyer, an academic department or a student may find a position on their own. Experiential Learning is open to all students. Students may start the application process by making an appointment with a career services professional prior to beginning work. Further information may be obtained by contacting Career Services, University of Dayton, Dayton, OH 45469-2711; phone (937) 229-2045; website www.udayton.edu/ careerservices.

## Fitz Center for Leadership in Community

The mission of the Fitz Center for Leadership in Community is to initiate and sustain partnerships with urban neighborhoods and larger communities for comprehensive community building and to provide a context for connected learning and scholarship. The Fitz Center's vision is for the University of Dayton to become a national leader in the education of community builders - including students, faculty, staff, and alumni - through their participation in community building partnerships. Grounded in Catholic social teaching and Marianist ideals, the Fitz Center stimulates, coordinates, and facilitates learning and scholarship on leadership that builds and sustains community.

The Fitz Center builds on the University's and the Marianists' long experience of linking University resources to those of the Dayton community to solve regional problems, develop community leaders,
and build neighborhoods and nonprofits. Through the Fitz Center, the University has built collaborative relationships with dozens of neighborhood, community, nonprofit, and local government organizations and associations in efforts that have enriched the quality of life for thousands of citizens within Dayton and surrounding communities. These projects also have afforded meaningful learning opportunities to hundreds of students and dozens of faculty members annually.

The Fitz Center represents a different way of learning, one that is based in practical reasoning and democratic civic engagement; a different way of seeing and understanding the urban community as a social ecology of children, families, neighborhoods, and systems; a different way of designing and implementing change using a model of comprehensive community building based on assets, not needs; and a different way of leading focused on adaptive leadership through constructive conversation that balances inquiry and advocacy. The Center also emphasizes the importance of relationships and the necessity of widely shared vision to move communities forward. These basic convictions guide planning and program development. They also build on the extensive community experiences of the Fitz Center staff.

The Fitz Center for Leadership in Community has four primary functions. These functions are carried out by teams of students, faculty, and Fitz Center staff working in partnership with neighborhood and community leaders. They are:

- Initiate and sustain partnerships.
- Develop communities of reciprocal learning, scholarship, and practice.
- Develop curricular and co-curricular innovations around leadership in community.
- Build university and community capacity for constructive deliberation and change.

The Fitz Center educates leaders who builds and sustain communities. The Center offers the following opportunities for learning about and experiencing leadership in community:

- Community Engaged Learning
- Leadership in Building Communities seminar
- Semester of Service
- Rivers Institute and River Stewards
- River Leadership Curriculum
- Annual River Summit
- Dayton Civic Scholars
- Community Assets Bus Tours
- Annual CityLinks Neighborhood Conference
- Dayton's Neighborhood School Centers
- Fr. Ferree Professor of Social Justice
- Research and evaluation

The Fitz Center provides an interdisciplinary minor in family development within the College of Arts and Sciences. It also conducts research on a broad range of contemporary family and community issues and offers opportunities for the development of social science research skills through tutorials and participation in its ongoing research projects. The Center serves as a resource to local governmental, health, religious, educational, and social service agencies by evaluating programs and developing solutions to the problems of families and the communities in which they live. The Fitz Center is committed to an integrated perspective on families and communities that draws on multiple disciplines. For more
information on this minor, visit FDV in Academic Information. The Fitz Center also houses the research division of the Montgomery County Office of Family and Children First. This office is available to assist students and faculty interested in local human services issues.

The Society of Mary supports the Ferree Professor of Social Justice in the Fitz Center. Marianist Provincial Father William Ferree was recognized as a key spokesperson on the Catholic theory of social justice. The Ferree Professor connects Catholic social teaching to the social sciences and other disciplines through the community-building mission of the Center.

The nature of the leadership challenges in the Dayton community requires adaptive learning and leadership across professional and community sectors. The University of Dayton has established a reputation as an effective community partner, especially with urban Dayton on difficult community challenges. The University of Dayton adds value to the community through the Fitz Center as it brokers and leads ongoing community building partnerships.

## General Studies (GEN)

The Bachelor of General Studies program permits students to pursue a non-traditional degree outside of any departmental major. Students can utilize the academic resources of the University to meet their individual, educational needs. For more information, click here (p. 165).

## Information Technology Facilities and Services

As one of the nation's premier institutions for technology-enhanced learning, the University of Dayton views information technology as central to both the living and learning experiences of students. UD has one of the most distinctive wired campuses in the nation: residence halls, as well as the 25 city blocks of UD owned houses comprising the Student Neighborhood, are equipped with high-speed data connections for each student. The University also supports more than 950 wireless access points to provide wireless coverage in most areas on campus, including academic buildings. In addition, students have access to an array of oncampus computer labs and computer-equipped classrooms.

To leverage this high-performance digital community, UD requires all incoming students to have a notebook computer that meets minimum hardware and software requirements set forth by each academic area. UD provides software such as Microsoft Office, SPSS, SAS, and Symantec AntiVirus to support learning, communication, and collaboration within and beyond the classroom.

The technology infrastructure at UD includes a gigabit network backbone with over 150 servers. In addition to maintaining this robust infrastructure, UD also supports learning and collaboration through such operations as the Help Desk, IT Training, and e-Learning. Students at the University of Dayton are encouraged to become highly proficient in using the tools of the information age as they prepare for their chosen careers.

## Institute for Pastoral Initiatives

The Institute for Pastoral Initiatives mobilizes the resources of the University of Dayton for partnerships with the church that create and implement innovative pastoral initiatives designed to meet the needs
of the church and to articulate faith within the context of contemporary culture.

The Institute co-directs the unique Forum for Young Catechetical Leaders for students. The FORUM prepares students to be certified to become catechists in the Catholic Church. Students are introduced to outstanding catechetical leaders from around the country. Each semester students gather one Saturday a month for a full day of catechetical formation. This is the only such program in the USA in a Catholic University.

The Virtual Learning for Faith Formation -online courses- is coordinated by the Institute. Courses are offered for CEUs to support Catechist, Youth Ministry and Lay Ecclesial Leadership Formation.

The Institute's overall mission is to reflect the Catholic Marianist identity of the University through education, consultative services, networking, applied pastoral research and multimedia catechetical productions and publications.

The Institute is currently focusing on research and teaching in the following areas:

1. The Forum for Young Catechetical Leaders
2. The Virtual Learning Community for Faith Formation (Internet)
3. Lay Ecclesial Leadership Formation
4. Religion, Spirituality and Film
5. Pastoral Communications and Ministry
6. New Paradigms for Adult Faith Formation
7. Advocacy for Persons with Disabilities within the Church

## Inst for Pastorl Int-Marianist Courses

IPM 220. Marianist Studies: Founders of the Marianist Family. 1 Hour Historical context and life of Father William Joseph Chaminade and other Marianist founders, especially Adele de Batz de Trenquelleon and Marie Therese de Lamourous.

## IPM 221. Community. 1 Hour

Exploration of the key theological principles for understanding the meaning and formation of community within the Marianist spirit.

IPM 222. Marianist Studies: Spirituality. 1 Hour
Examination of the cultivation of a life of prayer informed by Marianist spiritual traditions, particularly the role of Mary and the commitment to permanent Marianist mission.

## IPM 223. Marianist Studies: Prayer. 1 Hour

MARIANIST STUDIES: PRAYER An exploration of Father William Joseph Chaminade's methods and practices of prayer with insights for individual and group prayer.
IPM 224. Marianist Studies: Social Justice. 1 Hour
An exploration for integrating the insights of Father William Joseph Chaminade with the realities of modern life in envisioning a Marianist approach to social change for the twenty-first century.
IPM 225. Marianist Studies: Leadership. 1 Hour
Exploration of how to integrate excellent leadership skills with goals and principles of the Marianist mission. Designed for those invited to hold leadership roles in the Marianist family.

IPM 226. Marianist Studies: Charism. 1 Hour
Exploration of the concept of charism focusing on the Marianist charism. Emphasis on the principles and practices of Marianist spirituality, the Marianist apostolate and its importance in forming Marianist life, and the real and potential impact of the Marianist mission on the wider Church and global community.

## IPM 227. Marianist Studies: Education. 1 Hour

Advanced course in Marianist education based on a basic understanding of the Characteristics of Marianist Education (CMEs). Emphasis on the manner in which Marianist education interweaves instruction with development of persons committed to Fr. Chaminade's mission to educate in the faith and to multiply Christians.

IPM 228. Marianist Studies: Mary. 1 Hour
Survey of the roles Mary has which make her a model for believers to follow: believer, prophet, God-bearer/mother, disciple, and companion. Special attention is given to the events of her life and the life of her son Jesus. Prerequitie(s): (IPM 220, IPM 221) or permission of instructor.

## Inst for Pastorl Int Courses

IPI 100. Survey of Catholic Doctrine. 1 Hour
Comprehensive survey of Catholic doctrine which systematically follows the structure of the Nicene-Constantinopolitan Creed. Prerequisite(s): Permission.

## IPI 121. Conscience. 1 Hour

The steps, stages of development, and concepts concerning moral decision making as practiced within the context of the Roman Catholic faith. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 130. Introduction to Scripture. 1 Hour

An introductory overview of Christian scripture that is foundational for Old and New Testament online courses.

## IPI 131. Introduction to Old Testament. 1 Hour

Study of contemporary Old Testament studies to learn how to read a biblical text in terms of its literary qualities and cultural influences on interpretations. Prerequisite(s): REL 210.

IPI 132. Introduction to New Testament. 1 Hour
Introduction to the New Testament with a focus on the text's cultural contexts, literary composition, theological themes, and pastoral applications. Prerequisite(s): REL 211.

## IPI 180. Faith \& Human Development. 1 Hour

Study of the development of Christian spirituality as part of human moral and psychological development. Prerequisite(s): Permission.
IPI 210. Introduction to Prayer. 1 Hour
Introduction to the nature and types of prayer understood and practiced in Scripture and the theological and liturgical tradition of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 211. Prayer with Children. 1 Hour

Survey of how children develop spiritually and the best practices for teaching children techniques in prayer and developing their spiritual life. Prerequisite(s): IPI 100 or permission of instructor.

IPI 212. Introduction to Liturgy. 1 Hour
Introduction to the public and communal worship of the Church, its purpose and features, with special attention paid to the Mass and the Liturgy of the Hours. Prerequisite(s): IPI 100 or permission of instructor.
IPI 220. Catholc Social Teaching. 1 Hour
Survey of the foundations and key themes of the social teaching of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

IPI 225. Ecclesiology: The Beginnings of the Church. 1 Hour Introduction to the theological study of the Church, including basic terms and concepts essential for understanding the Church's nature, mission, and historical evolution. Prerequisite(s): REL 212.

## IPI 226. Ecclesiology: The Pilgrim Church. 1 Hour

Exploration of how the Church maintains its continuity with Jesus and reshapes its own self-understanding, focusing on how the Church continually reconstitutes itself through its decisions in meeting the challenges of each age. Prerequisite(s): REL 240.

## IPI 227. Ecclesiology: Reframing Church. 1 Hour

Focus on the Second Vatican Council as a whole with specific consideration of the Council's teachings regarding liturgy, Scripture, hierarchy, laity, and the Church's relationship with the world. Prerequisite(s): REL 241.

## IPI 229. Introduction to Islam. 1 Hour

The origin, development and spread of Islam is surveyed, followed by the study of the basics of this religion, including major practices and beliefs, the role of the Quran, perspectives on gender roles and how Islam views people of other faiths.Consideration will also be given to factors that give rise to either fundamentalist or democratic movements in the Muslim world. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 250. Church History I. 1 Hour

Survey of the origin and development of the Roman Catholic Church from the apostolic era through the Protestant and Catholic Reformation, with a focus on key events and personalities. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 251. Church History II. 1 Hour

Survey of the origin and development of the Roman Catholic Church from the Reformation era to the post-Vatican II era with a focus on key events and personalities. Prerequisite(s): (IPI 100, 250) or permission of instructor.

## IPI 253. History of Catholic Social Action. 1 Hour

An introduction to official Catholic Church documents on social teaching and how Catholic activism around the world has influenced these teachings. Prerequisite(s): REL 262.

## IPI 254. United States \& World Poverty. 1 Hour

Analysis of conditions, causes, and trends of poverty in the U.S. and abroad and responses through the theological lens of Catholic social teaching. Prerequisite(s): REL 260B, 263.

## IPI 260. Introduction to Catechesis. 1 Hour

Exploration and analysis of the purpose, methods, goals, tasks and essential content of catechesis.

## IPI 300. Christology. 1 Hour

Survey of the origins and development of the foundational doctrines and theology concerning the identity, work, and mission of Jesus Christ. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 301. Mary. 1 Hour

Survey of the place the Virgin Mary occupies in the history of salvation and in the Church's life. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 302. Sacraments. 1 Hour

Survey of the history, theology, pastoral and liturgical practice of the sacraments of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

## IPI 303. Sacraments of Initiation. 1 Hour

The history, theology, pastoral and liturgical practice of the sacraments of Baptism, Confirmation, and Eucharist.

IPI 304. Sacrament of Marriage. 1 Hour
The history, theology, official teaching, pastoral and liturgical practice of the Sacrament of Matrimony according to the Roman Catholic Church. Prerequisite(s): IPI 100 or permission.

## IPI 400. Advanced Catholic Social Teaching. 1 Hour

Detailed discussion of the principles and recurring themes of Catholic Social Teaching according to papal social encyclicals and other documents. Prerequisite(s): (IPI 100, 220) or permission of instructor.

IPI 435. Scripture \& Justice. 1 Hour
Exploration of Old and New Testament foundations for Catholic social teaching and social action.

IPI 450. Vocation Ministry. 1 Hour
Basic principles of ministry in the Church are introduced, according to guidelines outlined in the United States Conference of Catholic Bishops' National Certification Standards for Lay Ecclesial Ministers. Prerequisite(s): IPI 477 or permission of instructor.

## IPI 451. Communication \& Community. 1 Hour

Explores principles and techniques for effective communication in varied kinds of parish and diocesan ministry. Prerequisite(s): (IPI 450, 477) or permission of instructor.

## IPI 452. Collaboration in Community. 1 Hour

Study of techniques of effective collaboration with others in ministry and the identification and overcoming of obstacles to collaboration. Prerequisite(s): (IPI 450, IPI 451, IPI 477) or permission of instructor.

## IPI 453. Pastoral Culture. 1 Hour

Survey of the theories and concepts related to culture, the ethnic groups that make up the Catholic Church in the United States of America, and the skills needed to begin to work effectively in a multicultural parish community or other Catholic ministry setting. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 477) or permission of instructor.

## IPI 454. Leadership Ministry. 1 Hour

Survey of the principles, strategies, and best practices of the exercise of leadership and management within the context of Church ministry. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 453, IPI 477) or permission of instructor.

## IPI 455. Administrative Ministry. 1 Hour

Survey of the essential skills of management and supervision in Church ministry, including the spiritual dimension necessary for the effective exercise of those skills. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 453, IPI 454, IPI 477) or permission of instructor.

## IPI 456. Church Living System. 1 Hour

Integration of the principles, best practices, and skills needed for effective lay ministry leadership in the Church. Prerequisite(s): (IPI 450, IPI 451,
IPI 452, IPI 453, IPI 454, IPI 455, IPI 477) or permission of instructor.

## IPI 460. Foundations \& Vision for Adult Learning \& Faith Formation.

 1 HourExploration and analysis of the principles, tasks, and goals of adult faith formation within the larger context of lifelong catechesis. Prerequisite(s): IPI 477 or permission of instructor.

## IPI 461. Parish as a Learning Community. 1 Hour

Examination of the parish as a learning community in order to facilitate adult faith formation. Content includes the study of the dynamics and stages of community and group development, the characteristics of a learning community, and the development of strategies for the formation of the parish as a learning community. Prerequisite(s): IPI 460 or permission of instructor.

IPI 462. Many Faces of Adult Learners. 1 Hour
Examination of the intellectual and spiritual capacities and experiences which constitute adult learning and faith formation. Prerequisite(s): IPI 461 or permission of instructor.
IPI 463. Facilitating Adult Learning \& Faith Formation. 1 Hour Examination of the foundations, principles, and strategies for effective adult learning and facilitation of adult learning and faith formation for all stages of adulthood. Prerequisite(s): IPI 462 or permission of instructor.
IPI 464. Leadership Roles \& Skills for Adult Learning \& Faith Formation. 1 Hour
Study and development of leadership and team development skills for adult learning and faith formation, including skills in collaboration, forming and empowering others for roles in adult learning and faith formation, learning how to facilitate effective meetings, learning effective methods of communication in groups, dealing with conflict, and developing ways for leaders to create a balanced approach to Christian life. Prerequisite(s): IPI 463 or permission of instructor.
IPI 465. Spirituality in Adult Learning \& Faith Formation. 1 Hour Exploration of the defining spirituality, and the principles, techniques, and goals required for an authentic spiritual life in the specific context of adult faith formation. Content also includes a survey of the different schools of spirituality within Catholic tradition. P rerequisite(s): IPI 464 or permission of instructor.

## IPI 466. Designing \& Implementing Adult Learning \& Faith

## Formation. 1 Hour

Presentation and analysis of the principles, tasks, and goals of adult faith formation within the larger context of lifelong catechesis. Prerequisite(s): IPI 465 or permission of instructor.
IPI 477. Vocation, Spirituality \& Discipleship of Catechists. 1 Hour Exploration and analysis of the vocation, spirituality, and discipleship of catechesis. Prerequisite(s): IPI 260 or equivalent.
IPI 480. A Vision for Catholic Youth Ministry. 1 Hour Introduction to the themes, principles, components, and goals to construct successful Catholic youth ministry programs according to guidelines outlined in the US Conference of Catholic Bishops pastoral plan, Renewing the Vision. Prerequisite(s): IPI 477 or permission of instructor.

## IPI 481. Relational Ministry with Youth. 1 Hour

Exploration and analysis of the relationships youth have with their parents, youth ministers, and the parish community as a whole. Prerequisite(s): IPI 480 or permission of instructor.
IPI 482. Prayer \& Worship with Adolescents. 1 Hour
Study of pedagogical practices to help young people make prayer a central and regular habit of their lives. Prerequisite(s): IPI 481 or permission of instructor.

## IPI 483. Principles for Addressing Diversity Issues in Youth Ministry. 1 Hour

Survey of best practices for developing effective youth ministry programs for young people from plural backgrounds and environments. Prerequisite(s): IPI 482 or permission of instructor.

## IPI 484. Planning Youth Ministry. 1 Hour

Survey of the common factors and best practices that contribute to effective planning for youth ministry. Prerequisite(s): IPI 483 or permission of instructor.

## IPI 496. Parish \& Social Action. 1 Hour

Exploration of the roots of the parish's social mission in Scripture and Catholic social teachings. Prerequisite(s): REL 260B, 263.

## Interdisciplinary Studies

All interdisciplinary and experimental studies at the University of Dayton must involve University students and faculty, must be commensurate with University resources or resources accessible to the University, and must further the recognized goals and purposes of the University. When these studies involve disciplines within the College of Arts and Sciences or one of the Schools, they are administered by or through the offices of the respective deans. When they are University-wide, i.e., inter-school, they are usually administered by the Office of the Provost.

## Interdisciplinary-AS Courses

ASI 100. Academic Reading \& Dialogue. 3 Hours
Academic Reading and Dialogue.
ASI 110. Development of Western Culture in a Global Context. 7 Hours
An introductory two-course sequence integrating the study of English, history, philosophy and religious studies. The first course, ASI 110 (7 sem. hrs), offered in the fall semester, covers ancient civilizations through early modern civilization. (Completion of ASI 110 counts as completion of HST 103 and REL 103.).
ASI 120. Development of Western Culture in a Global Context. 8 Hours
An introductory two-course sequence integrating the study of English, history, philosophy and religious studies. The second, course, ASI 120, ( 8 sem. hrs), offered in the spring semester, continues from the Enlightenment to the contemporary period. Restricted to first-year students in the Core Program. (Completion of ASI 120 counts as completion of second historical study course, PHL 103, and ENG 200H.) Prerequisite: ASI 110.
ASI 150. Introduction to the University Experience. 1 Hour Examination of the values that inform academic progress in the College; discussion of strategies for taking full advantage of academic opportunities and integrating formal and experiential learning.

## ASI 201. Personal Value Development. 2 Hours

Exploration of the conceptual framework of value development. Application of concepts in such personal decision making as educational and career planning, developing satisfying personal relationships, and using time productively.

## ASI 203. The Dayton Community. 3 Hours

An interdisciplinary social science course describing and analyzing the nature of community issues and problems of the Dayton area; various approaches to addressing local concerns including public, private and citizens initiatives are explored.
ASI 214. Dramatic Kinesics in a Foreign Language. 1 Hour Corrective work in foreign language sound and gesticulatory patterns accomplished by enacting scenes from a play in the language. May be repeated in one language in successive stages of difficulty up to three semester hours. Registration may be retroactive. Prerequisite(s): Basic instruction in language; permission of instructor.
ASI 228. Focus on Women. 1 Hour
Interdisciplinary seminar on the changing roles and status of women. Requirement for women's studies minors. May be repeated since topics change yearly.

## ASI 301. Democracy \& Deliberation. 3 Hours

Democracy \& Deliberation explores competing theoretical approaches to and empirical assessments of democratic governance. Particular attention is paid to the role of deliberation and civic engagement in democracies. Students will help organize and execute a deliberative forum as part of the course.

## ASI 305. Appalachian Studies. 3 Hours

Appalachian history and its influence on the present; problems of recent events; influence of local government and federal programs on the people; economic problems of underprivileged people and the future of industrial development; ecology of the region; literature, art, and music; psychology of social change and community development in the underdeveloped regions; health and mental health; problems of the Appalachian migrant.

## ASI 320. Cities \& Energy. 3 Hours

An interdisciplinary examination of the influence of energy on the urban environment since the Industrial Revolution, how this relationship has affected every aspect of city life from culture to infrastructure, and prospects for the future of this relationship.

## ASI 322. Cities \& Suburbs: The Influence of Place (Social Science). 3 Hours

This interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/ suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The social science domain is emphasized. This course is cross-listed with ASI 323 and ASI 324. Students taking ASI 322 may not receive credit for ASI 323 or ASI 324.

## ASI 323. Cities \& Suburbs: The Influence of Place (Philosophy). 3

 HoursThis interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The philosophy domain is emphasized. This course is cross-listed with ASI 322 and ASI 324. Students taking ASI 323 may not receive credit for ASI 322 or ASI 324.

## ASI 324. Cities \& Suburbs: The Influence of Place (Religious

 Studies). 3 HoursThis interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/ suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The religious studies domain is emphasized. This course is cross-listed with ASI 322 and ASI 323. Students taking ASI 324 may not receive credit for ASI 322 or ASI 323.

## ASI 325. Cities \& Institutions. 3 Hours

Examination of important urban institutions, including, but not limited to, city planning, economic development, public safety, and education.

## ASI 341. Special Topics in Arts Study. 1-3 Hours

Examination of an interdisciplinary topic in arts study. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

ASI 342. Special Topics in Historical Study. 1-3 Hours
Examination of an interdisciplinary topic in historical study. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

## ASI 343. Special Topics in Philosophy Study. 1-3 Hours

Examination of an interdisciplinary topic in philosophy. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

## ASI 344. Topics in Religious Studies. 1-3 Hours

Examination of an interdisciplinary topic in religious studies. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

## ASI 345. Special Topics in Social Science. 1-3 Hours

Examination of an interdisciplinary topic in social science. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.
ASI 346. Special Topics in Physical \& Life Science. 1-3 Hours Examination of an interdisciplinary topic in physical and life sciences. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

## ASI 347. Physics \& Literature. 3 Hours

Examination of works of literature that are based on principles of physics. Basic physics experiments will be performed to reinforce theoretical principles. Prerequisite(s): ENG 102 or equivalent; SCI 190 or other PHY course.

## ASI 350. Interdisciplinary Film Study. 1 Hour

A capstone course in the film studies minor. Interdisciplinary study of film from religious, philosophical, literary, creative, technological and institutional perspectives. Requirement for film studies minors. Prerequisite(s): Any combination of four courses (twelve semester hours): REL 372, PHL 324, ENG 331, ENG 332, CMM 345, other approved substitutes.

## ASI 357. Vocation \& the Arts. 3 Hours

Interdisciplinary arts study course that explores the impact of an artist's sense of vocation on art; use of autobiography for self-knowledge. Open to Chaminade Scholars. Prerequisite(s): REL 356 or permission of department chairperson.

## ASI 358. Christianity, Citizenship \& Society. 3 Hours

Interdisciplinary social science course, capstone for Chaminade Scholars. Presentation of historical-theological context of the church and its impact on society. Designed to help students think through their place and role in the society in which they live, work, and worship. Prerequisite(s): (ASI 357; REL 356) or permission of department chairperson.

## ASI 371. Professional Ethics in a Global Community - Business Administration. 3 Hours

Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

## ASI 372. Professional Ethics in a Global Community - Education. 3

 HoursVirtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

## ASI 373. Professional Ethics in a Global Community - Engineering. 3

 HoursVirtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

## ASI 374. Professional Ethics in a Global Community - Philosophical. 3 Hours

Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

## ASI 375. Professional Ethics in a Global Community - Religious. 3

 HoursVirtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

## ASI 390. Social Justice in Latin America. 3 Hours

This course adopts an inter-disciplinary, highly experiential approach to the topic of social justice in Latin America by focusing on the social, theological, and ethical dimensions of justice. Taught on-site in Latin America. Prerequisite(s): SPN 201 or equivalent or permission of instructor.

## ASI 395. Integrative Capstone Project, India. 3 Hours

Development and presentation of a major project which demonstrates integration of philosophical analysis and synthesis with at least two other disciplinary perspectives and which makes application of these disciplinary perspectives to an aspect of a life of ministry.

ASI 397. Capstone Seminar on Human Rights Advocacy. 3 Hours
This required capstone seminar enables seniors in the HRS program to (1) integrate their formal academic studies and internship or research experiences in light of the Marianist spirit of Christian Humanism that guides the University of Dayton, (2) discuss emerging human rights challenges that they are likely to confront as human rights professionals, and (3) consider possibilities for leadership and service in human rights or humanitarian assistance as a vocation. Seminar participants will read and discuss a set of readings concerning the moral foundations of the human rights idea, emerging human rights challenges, and new advocacy strategies. Students will write and present final papers in which they reflect on the study of human rights at the University of Dayton and their internship or research experiences, and consider the possibilities of pursuing human rights service as a vocation. Prerequisite(s): POL 333, POL 334 or permission of instructor.
ASI 398. Special Topics in International Development. 3 Hours Study of political, philosophical, historical, and economic questions associated with developing countries. Topics determined by an interdisciplinary team.

## ASI 399. Interdisciplinary Topics. 3 Hours

Study of special topics or themes of an interdisciplinary nature. Specific subtitles announced in composite. May be repeated as topics change.
ASI 404. Applied Study in Community Issues. 3 Hours
An advanced seminar that generates applied social science research related to contemporary social problems and public policy-making in the Dayton area. Students participate in research teams to assist government agencies in defining and analyzing critical social conditions (under spervision of faculty from various disciplines). Prerequisite(s): Permission of instructor.

ASI 448. Seminar in Family Development. 1 Hour
Interdisciplinary examination of issues relating to family relationships, changes in family life, and the social context of family life. Required of family development minors. Prerequisite(s): Twelve semester hours completed in the minor.

## ASI 495. Integrative Capstone Project, India Program. 0 Hours

 Development and presentation of a major project which demonstrates integration of philosophical analysis and synthesis with at least two other disciplinary perspectives and which makes application of these disciplinary perspectives to an aspect of a life of ministry.
## Mini Courses Courses

UDI 102. Plan for Financial Success. 1 Hour
No description available.
UDI 110. Maximizing Your International Experience - Explore. 1 Hour No description available.

## UDI 145. Life Skills for First-Year Student Athletes. 1 Hour

The purpose of this course is to introduce student athletes to various life skills needed to successfully manage the pressures of being a student athlete. It will also help them recognize the unique demands of college student-athletes and assist them in acquiring skills, which allow them to respond to those challenges.
UDI 146. Trans College Athlete Grad. 1 Hour
No description available.
UDI 152. Student Challenges. 0.5 Hours
No description available.

## UDI 164. Faith, Vocation \& Leadership. 1 Hour

Students explore topics such as Christian identity, discipleship, and leadership (second semester: evangelization, service, and prayer) in an effort to understand Christian vocation and leadership.
UDI 165. Chaminade Scholars. 0.5 Hours
No description available.
UDI 166. Choosing Your Career. 1 Hour
No description available.
UDI 172. Stargazing. 1 Hour
No description available.
UDI 175. The Art \& Science of Learning. 2 Hours
Students in this course will explore topics related to learning and the brain as well as a wide variety of strategies and techniques for improving their own learning.

## UDI 176. Human Rights Week Committee. 1 Hour

No description available.
UDI 177. International Men's Basketball Eurpoean Tour. 1 Hour No description available.

UDI 182. Italy Tour Women's Basketball. 2 Hours
With the goal of combining, enriching, and interweaving the women's basketball tour of Italy (August, 2013) and the educational and community building experience of being abroad, students will learn introductory as well as in-depth information and insights as they are guided in the process of thinking, reflecting, conversing, and writing about the history, society, culture, and art of Italy. (only to women basketball student athletes).
UDI 185. Junior Achievement Economic Education Project. 1 Hour The Junior Achievement Program has designed introductory economic education packages to elementary classrooms. This course is a unique opportunity to do "service-learning" in the Dayton Public Schools and possibly charter schools in the vicinity. To be a JA tutor, no prior experience in economics is necessary; any college student is qualified. After training, each participant will be assigned to an area teacher (typically at the elementary or junior level) to make arrangements to present the material in 5-6 two-hour increments.

UDI 188. Technology Certification. 1 Hour
No description available.
UDI 201. UD Interdisciplinary Experience II. 6 Hours
No description available.

## UDI 202. Finanical Strategies/Real World. 1 Hour

No description available.
UDI 205. Using Technology to Transform Learning. 1 Hour In this course, we will learn how to evaluate and use technologies for learning, with a special focus on mobile applications (e.g. Apps for iOS, Android, etc). This course includes class discussions and inquirebased activities and assignments to critically review various moblile applications for education and learning. Although not required, students are encouraged to provide their own mobile device.

## UDI 214. Peace Leadership. 1 Hour

No description available.
UDI 220. Maxie Prepare. 1 Hour
No description available.
UDI 233. Sophomore Year Experience. 1 Hour No description available.

## UDI 241. Literature Peace Prize. 1 Hour

No description available.

## UDI 247. Introduction to Principles of Liturgy for Christian Musicians. 1 Hour

This course provides the liturgical background and knowledge for thE new undergraduate music ministers.
UDI 250. Exploring Everyday Techonology. 1 Hour
No description available.
UDI 251. U LD-Pear Academic Leadership. 1 Hour
No description available.
UDI 262. Sustainability Energy. 1 Hour
No description available.
UDI 265. Christian Leadership Development. 1.5 Hour No description available.

UDI 270. Premedical Community Health Experience. 1 Hour
Many medical schools create pre-medical programs to support local students interested in pursuring a career in medicine. For instance, at Reach Out Montgomery County, UD premedical students presently attend a workshop call triage training before volunteering in at the free clinic as intake specialist. This training introduces the pre-medical student to the basics of communication and documentation as a part of the intake procedure during a provider visit as the free clinic. Vital signs, BMI, and basic screening tools are now used to capture the reason for the patient's visit. Students are assigned in pairs and in direct communication with the RN clinic supervisor as they perform initial assessment "intake" information.

## UDI 271. Vowed Women in Religion. 1 Hour

This course will exlpore vowed religious life of women's communities in the Roman Catholic Church. It will include a brief historical overview and will then focus on the charisms of sereral women's religious communities today, paying particular intention to those that are active in the United States and especially on campus. The course will include a required livein experience with a community of the student's choice.

UDI 273. Introduction to Urban Poverty. 3 Hours
No description available.

## UDI 278. Health Careers Seminar. 1 Hour

No description available.
UDI 281. Business Ethics Case Competition. 1 Hour
By coaching a team to enter into a business ethics case competition, this course sharpens our student understanding of the principles of ethics and of the complexity of situations encountered reqularly by executives and other professionals.
UDI 283. MOS Certification - EXCEL. 1 Hour
No description available.
UDI 284. MOS Certification - WORD. 1 Hour
No description available.

## UDI 310. Maxie: On-Site. 0-1 Hours

No description available.
UDI 315. The River Steward Experience I. 1 Hour
Classroom experience for First Year River Stewards. This course focuses on leadership development in the pursuit of education, experience and action within the community. Open to first year River Stewards only.

UDI 324. Live Simply Sustainability. 1 Hour
No description available.

## UDI 325. Women in Community: The Benedictine Experience. 2 Hours

This course will prepare students for a week long monastic experience at a women's Benedictine Community in Erie, PA. At Mount Saint Benedict students will experience the monastic rhythm of prayer and work; encounter the inextricable link between faith and justice; and discover sacred beauty in the ordinary aspects of life made holy. There is a breakout fee of $\$ 250.00$ for the required May breakout to the monastery.

## UDI 341. Sexual Diversity. 1 Hour

This course explores the lives and development of lesbian, gay, and bisexual people in contemporary American society with particular attention to individual, relationship, and community issues and their intersections. Students will be encouraged to examine their fears and prejudices as a way of discovering that sexual minority individuals are both unlike and just like everyone else. In this way all students- - straight or gay - can learn to be more sensitive to differences in sexuality that exist in the world around them.

## UDI 350. Wines of the World. 1 Hour

This course provides a study of world wines from several perspectives (history, organoleptics, geography, and economics) to develop in the student a deeper understanding and appreciation of wine both personally and socially.

## UDI 353. Project Letterpress. 0.5 Hours

Students receive intensive instruction on setting letterpress type and work on the design, printing, and cuating of a large edition of letterpress prints. Prerequitie(s): VAF253.

## UDI 359. Employment Readiness. 1 Hour

Conducting your job search can be a daunting task, but breaking it down into manageable steps will help you be successful. You will acquire professionalism with ease and become more self assured in business interactions. You will also learn how to become a highly desirable employee by understanding career leadership skills most desired by employers, such as professionalism, problem solving, respecting workplace boundaries and diversity.

## UDI 361. Cross Cultural Immersion Preparation. 1 Hour

 No description available.
## UDI 363. ULEAD: Leadership Program Emerging Leaders. 2 Hours

The UleaD course is carefully structured to explore concepts of leadership. Facilitated as an emerging leaders programs, UleaD focuses on providing opportunities for students to develop a better understanding of self and others, strengthen leadership skills, and network.

## UDI 364. Vocation \& Leadership. 1.5 Hour

Students explore topics such as community, prayer, and Christian servant-leadership in an effort to understand and engage in communal faith development and vocational discernment.

UDI 365. Faith, Vocation \& Leadership. 1.5 Hour
No description available.

## UDI 366. Challenging Faith. 1 Hour

This course explores ways of balancing social life and faith on UD's campus. Students will reflect on life experiences and discuss alcohol, sexuality, and over commitment as challenges to their faith journeys.

## UDI 368. Marianist Studies in Community. 1.5 Hour

Living in intentional community will guide the students participating in the Marianist Student Community program. Student will engage in formation and dialogue concerning the Catholic and Marianist mission and identity of UD through formation in-service, prayer, and community building.

## UDI 371. Art Street Experience. 1 Hour

No description available.

## UDI 382. International Films. 1 Hour

An advanced look at the multitude of significant films that are made around the world. Each film screened will be examined from historical, religious, philosophical, cultural, literal and artistic standpoints with the assistance of panel discussions led by faculty members from the Humanities.

## UDI 385. Intergroup Dialogue: Religion. 1 Hour

The Intergroup Dialogues course is carefully structured to explore social group identity, conflict, community and social justice. It involves an identity group defined by race and ethnicity. Each identity group is represented in the dialogue with two facilitators--one from each represented identity group--who encourage dialogue rather than debate. Facilitators and participants explore similarities and differences among and across groups and strive toward building a multicultural and democratic community.

## UDI 386. Inventing Identity. 1 Hour

Making use of the 20th Annual Humanities Symposium, Inventing Identity, this interdisciplinary course addresses questions about women's identity formation in the midst of race, gender, abilities, class, and power differences.

## UDI 387. President's Diversity. 1 Hour

No description available.
UDI 389. Intergroup Dialogue: Ethnicity. 1.5 Hour
The Intergroup Dialogues course is carefully structured to explore social group identity, conflict, community and social justice. It involves an identity group defined by race and ethnicity. Each identity group is represented in the dialogue with two facilitators - one from each represented identity group - who encourage dialogue rather than debate. Facilitators and participants explores similarities and difference among and across groups and strive toward building a multicultural and democratic community.

## UDI 390. Servant Leadership Seminar for REAL Dayton Leaders. 1 Hour

In this service learning mini-course, (approximately 13) students are selected to be the REAL Dayton. Leaders will enhance, incorporate and reflect upon servant leadership skills to be effective leaders for this fall break program. Also during course meeting time, the leaders will work as a team to develop and plan the service projects, reflection activities and educational opportunities for the REAL Dayton program. At the end of the course leaders will reflect on the service projects completed during the REAL Dayton, the effectiveness of the program for UD students and their own experience as servant leaders.

## UDI 391. Civic Scholar Experience III. 1 Hour

No description available.

## UDI 392. Dayton Civic Scholar. 1 Hour

No description available.

## UDI 393. Community Service Internship. 3 Hours

This service-learning mini course, which is only open to students in the Semester of Service program combines community service with reflection. Requirements include 450 hours of direct community service, an observation/reflection journal, required readings, a short story written from their community service experiences and class discussions on related issues. Only open to (5) students in the Semester of Service program.

## UDI 394. Civic Scholar Experience II. 1 Hour

This mini-course will prepare students to get the greatest possible benefit from their participation in the study abroad offering, 'Investing a Great City: Integrated London ISSAP 2006'.
UDI 395. Civic Scholar Experience IV. 1 Hour No description available.
UDI 396. Introduction to Medical Terminology. 1 Hour
No description available.
UDI 398. Civic Scholar Experience V. 1 Hour No description available.

UDI 399. Civic Scholar Experience VI. 1 Hour
No description available.
UDI 400. UD Interdisciplinary Experience II. 6 Hours
No description available.
UDI 410. Maxie: Integration. 1 Hour
No description available.
UDI 415. The River Steward Experience II. 1 Hour
Classroom experience for Second Year River Stewards. This course focuses on leadership development in the pursuit of education, experience and action within the community. Open to Second Year River Stewards only.
UDI 419. Forum - Young Catecetical Learner. 1 Hour No description available.

## UDI 421. UD Post-Undergraduate Mini Course. 1 Hour

This mini-course is designed for graduating seniors who are considering participating in service after graduation. Students will explore opportunities to live out their vocation as well as come to a better understanding of spirituality, community living and discerning God's call.
UDI 499. Continuing Education. 1 Hour
No description available.

## Interdisciplinary-Bus Courses

BAI 103L. Business Computing Laboratory. 1 Hour
Introduction to business software skills including spreadsheets, relational databases, and integration of computer applications. Overview of UD computer ethics policies.
BAI 150. Business Educational Planning. 1 Hour
Introduction to the School of Business Administration, the University, and educational planning.
BAI 151. Business Integration Experience. 1 Hour Integrated introduction to major business processes and decision making.
BAI 294. Special Topics in the School of Business Administration. 3 Hours
Special Topics in the School of Business Administration.
BAI 400. Dean's Leadership Laboratory. 0-3 Hours
Leadership experience under the supervision of the Dean's office. Permission of Dean's office.
BAI 497. Laboratory Work Experience. 1-6 Hours
Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization; practical experience in work associated with the student's major or minor concentration. (See internship coordinator for details.) Does not count toward major. Prerequisite(s): Permission of dean.

## Office of Educational Services

The Office of Educational Services provides assistance to Catholic schools, public school districts, and other educational providers to enable school personnel to reach policy decisions based on relevant knowledge and value commitments. "Relevant knowledge" includes financial studies, needs assessments, attitude surveys, enrollment projections, and other information necessary for making intelligent decisions about specific policies. "Value commitments" include consideration of educational aims and ethical questions inherent in policy decisions. One of the priorities of the office is service to Catholic schools. Another is its effort to act as a network to link those who share/value concerns as they relate to educational policy-making. The office is located in, draws support from, and uses the resources of the School of Education and Allied Professions. For more information contact the Associate Dean, School of Education \& Health Sciences.

## Pre-Law

The Prelaw Program, designed to serve students from all areas of the University, provides undergraduates and alumni interested in law school with opportunities to acquire the knowledge and skills necessary for a successful legal career. While students interested in careers in law should choose their undergraduate majors to match their interests and abilities, they should also contact the Prelaw Program as early in their undergraduate careers as possible so they can receive effective prelaw advice.

The Prelaw Program, with fourteen prelaw faculty advisors, provides students with suggestions for courses that help develop skills needed for legal education, with information about the law school admission process, with aid in taking the Law School Admission Test (LSAT) including simulated tests and prep workshops, and with help in completing law school applications. In addition, the Program supports the Political Science prelaw internship, allowing students to gain valuable experience working in an attorney's office, sponsors both the undergraduate chapter of Phi Alpha Delta and a mock trial program in which students compete locally, regionally, and nationally, and offers personalized advising based on the individual student's talents, interests, and goals.

For further information concerning the Prelaw Program at the University of Dayton, students should contact the Prelaw Program in Alumni Hall, Room 124; phone (937) 229-4229.

## Research Institute (UDRI)

The University includes research as one of its stated purposes. In addition to faculty members in academic departments, a large staff of professional research scientists, engineers, and technicians conduct basic and applied research. These activities are externally funded and most are conducted in the laboratories of the University of Dayton Research Institute.

Several hundred students are employed in research programs in accord with the University's emphasis on integration of research and instruction. In addition to financial benefits, this research participation provides students with valuable work experience and exposure to issues at the forefront of contemporary science and engineering.

## Reserve Officers Training Corps (ROTC)

The Department of Military Science offers the Army ROTC training program on campus, leading to a commission as a second lieutenant in the U.S. Army at the time of graduation. For more information, visit the Department of Military Science.

In coordination with Wright State University, the Department of Aerospace Studies offers the Air Force ROTC training program on campus and at Wright State University. Successful completion of the program provides the opportunity to become a commissioned officer in the United States Air Force.

## University Honors Program

The University Honors Program provides curricular offerings, programming, and benefits to undergraduates who achieve and maintain superior academic records. Students earn the designation "University Honors student" in one of two ways. Entering first-year students with outstanding academic credentials are accepted into the Honors Program upon admission to the University. Students may also enter the Honors Program after their first year with a minimum 3.5 grade-point average. All University Honors students are expected to maintain at least a 3.5 GPA.

Membership in the University Honors Program requires continued progress towards one of the Honors Program-designated diplomas. Honors students complete the requirements for an Honors diploma in one of two ways: by earning 15 Honors credits and completing a six-credit Honors thesis project, or by earning 21 Honors credits without a thesis. To receive the Honors with Distinction diploma, Honors students earn 21 Honors credits and also complete the six-credit Honors thesis project.

Students are offered a selection of Honors courses each term including special sections of General Education courses. In most instances first-year University Honors students will be placed in The Freshman Writing Seminar for Honors students (ENG 114), a semester course that substitutes for a two-semester English requirement for non-Honors students. A limited number of upper class Honors courses are also available each semester. Students may also earn Honors credits through Honors-designated learning living communities, completion of the Chaminade Scholars program, or completion of the CORE program. Honors students must earn a grade of B or better for any Honors courses to count towards the Honors diploma requirements. Specific ways of earning Honors credits can be found on the Honors Program website at honors.udayton.edu. Students who meet the University Honors Program graduation requirements will earn an Honors Program-designated diploma and key.

Numerous benefits are available to members of the University Honors Program. The University Honors Program sponsors speakers, cultural events, the Honors Art Exhibition and the Honors Students Symposium each year. All University Honors students are guaranteed a place in U.D. housing during their undergraduate career. Special Honors housing is available for a limited number of University Honors students, and upperclass University Honors students who choose to live together receive preferential treatment in the annual housing lottery. University Honors students benefit from early registration. They also receive graduate-level library benefits and enjoy the use of a special Honors study room in the library.

University Honors students undertaking Honors thesis projects may apply for thesis grants; outstanding projects may be eligible for funding through the Palermo Honors Program Founders Fund. Grants may also be available for Honors students who present their academic research at professional conferences. University Honors students completing at least sixty semester credit hours are eligible to apply to the Cordell W. Hull International Fellows Fund for University Honors students. Established in 1997-98, this fund awards grants to support international learning, leadership, and service projects. Finally, a limited number of upper-class awards may be made to Honors students who demonstrate academic excellence and financial need.

## Directories

Search the Directories by:

- Faculty (p. 78)
- Governing and Advisory Boards (p. 64)
- Graduate Faculty (p. 64)
- Officers of the University (p. 65)
- Research Institute Staff (p. 71)


## Graduate Faculty

Nearly all tenured or tenure-track faculty members at the University of Dayton, with rank of at least Assistant Professor, are members of the Graduate Faculty, as are most Emeritus/Emerita faculty, Distinguished Service Professors and Distinguished Professors at Large. In addition, many other individuals with appropriate experience and qualifications, both internal and external to the University of Dayton community, have been granted Graduate Faculty Status. Students should contact their Dean's office for an up-to-date list of graduate faculty in his or her academic unit.

## Governing and Advisory Boards

## Board of Trustees

Steven D. Cobb, Chair; Rev. Martin A. Solma, S.M., Vice Chair; Daniel J. Curran, Secretary; Catherine V. Babington; Mary H. Boosalis; Thomas
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## Academic Senate

Carolyn Roecker Phelps, President, Linda A. Hartley, Vice President, Emily A. Hicks, Secretary, Philip A. Anloague, Paul H. Benson, Deborah J. Bickford (ex officio), Paul M. Bobrowski, Patrick G. Donnelly (ex officio), George R. Doyle, Jr., E. James Dunne, Andrew O. Evwaraye, Ralph R. Frasca, Myrna Gabbe, Harry Gerla, Vinod K. Jain, Kevin R. Kelly, Carissa M. Krane, Terence Lau, Laura M. Leming, Joe D. Mashburn, John P. McCombe, Paul E. McGreal, R. Kurt Mosser, Edward F. Mykytka, Leslie H. Picca, Joseph E. Saliba, Tony E. Saliba, Thomas D. Skill (ex officio), Andrew Slade, Yong Song, Karen K. Swisher, Paul
M. Vanderburgh (ex officio), Joseph L. Watras, Kathy M. Webb, John J. White.

Officers of the University

| Title | Name |
| :--- | :--- |
| President | Daniel J. Curran, Ph.D. |
| Provost | Joseph E. Saliba, Ph.D. |
| Vice President for Finance and <br> Administrative Services | Thomas E. Burkhardt |
| Vice President for Student |  |
| Development |  |
| Vice President for University |  |
| Advancement |  |$\quad$ William M. Fischer, J.D.

## OFFICE OF THE PRESIDENT

## Title

President
Vice President for Mission and Rector
Executive Assistant to the President Jane Perrich

## Academic Affairs

| Title | Name |
| :---: | :---: |
| Provost | Joseph E. Saliba |
| Assistant to the Provost | Margaret Lisjak |
| Faculty Hiring Coordinator | Amy Askren |
| Institutional Researcher for Academics | Elisa A. Bernal |
| Vice President for Enrollment Management | Sundar Kumarasamy |
| Assistant Vice President for Enrollment Management and Market Development | Robert F. Durkle |
| Assistant Vice President for Enrollment Management and Dean of Admission and Financial Aid | Julia K. Harmon |
| Assistant Vice President for University Marketing and Strategies | Molly Wilson |
| Assistant Vice President and Registrar | Thomas J. Westendorf |

Director of Enrollment Services and Rebekah Lawhorn
Associate Registrar
Associate Registrar- Registration Patsy L. Martin
Vice President for Research and Michael V. McCabe
Executive Director, University of
Dayton Research Institute (UDRI)
Director, University of Dayton
Research Institute (UDRI)
Vice President for Student William M. Fischer Development
Associate Vice President and Dean Christine M. Schramm of Students
Assistant Vice President for Student Carri S. Wallace
Development
Assistant Vice President for Health Steven D. Mueller
and Wellness and Director of
Counseling Center
Director, Communications and Edel M. Jesse
Community Relations for Student
Development
Director, Campus Recreation Melissa Longino
Associate Provost for Academic Deborah J. Bickford
Affairs and Learning Initiatives and
Director, Ryan C. Harris Learning-
Teaching Center
Associate Director, LTC, Director, Stephen W. Wilhoit
Office of Writing, Research, and
New Media
Associate Director, LTC, Director, David J. Wright
Office Curriculum Innovation and E-
Learning (UDit)
Associate Director, LTC, Director, Elizabeth G. Harrison
Office of Learning Services
Assistant Director, Learning Dude J. Coudret
Services
Assistant Director, Disability Brenda D. Cooper
Services
Director, Career Services Jason C. Eckert
Associate Director, Career Advising Elizabeth Seager
and Experiential Education
Associate Director, Employer Chris Wiley
Relations and IT
Executive Director, Center for Amy E. Anderson
International Programs
Associate Director, Campus Sangita Gosalia
Engagement
Associate Director, Partnership and Tina J. Newton
Exchange
Programs Manager, Education Jean Paul Sewavi
Abroad
Assoicate Director, International Timothy Kao
Student and Scholar Services
Program Manager, Intensive Karin Avila-John
English Program
Director, University Honors Program David W. Darrow
Associate Director Carissa M. Krane

| Associate Director, Distinguished Fellowship Advising | Laura T. Cotten | Administrative Assistant, Special Programs and Continuing | Denise M. Quillen |
| :---: | :---: | :---: | :---: |
| Assistant Director | Jeanne R. Palermo | Education |  |
| Coordinator, Office of Academic Success for Student-Athletes (OASSA) | Elizabeth A. Flach | Administrative Assistant, Graduate Academic Affairs | Yolanda R. Copeland |
|  |  | Dean, College of Arts and Sciences | Paul H. Benson |
| Coordinator, Office of Academic Services for Student-Athletes (OASSA) | Vera L. Gomes | Associate Dean for Faculty Development and Graduate Programs | Donald J. Polzella |
| Director, Art Street | Brian LaDuca | Director of Budget and Operations | Maura Donahue |
| Associate Director | Adrienne Niess | Associate Dean for Integrated | Donald L. Pair |
| Director, Women's Center | Lisa Rismiller | Learning and Curriculum |  |
| Coordinator | Pattie Waugh | Assistant Dean | Kimberly Trick |
| Associate Provost and Chief Information Officer | Thomas D. Skill | Assistant Dean | Cynthia T. Shafer |
|  |  | Assistant Dean | Timothy A. Wilbers |
| Associate CIO | Susan S. McCabe | Coordinator, University Arts Series | Eileen E. Carr |
| Director, University Information Systems | Victoria L. Adams | Director, Institute for Pastoral Initiatives | Angela A. Zuwkowski M.H.S.H. |
| Director, Systems Administration and Networking | Al J. Stern | Director, Fitz Center for Leadership in Community | Richard T. Ferguson |
| Director, Application Support and Integration | Thomas U. Weckesser | Director, Information Technology | Jeremy P. Mlazovsky |
|  |  | Dean, School of Business | Paul Bobrowski |
| Assistant CIO, Customer Relations, and Executive Director, Technology Support Services | Jacquise Y. Jackson | Associate Dean | Elizabeth F. Gustafson |
|  |  | Associate Dean | Harvey Enns |
| Director, IT Administrative Services | Karen S. Bull | Assistant Dean, Center for Academic Success | Janet R. Leonard |
| Associate Director, IT Infrastructure and AV Systems Planning | Jeremy S. Flohre | Academic Advisor, Center for Academic Success | Brad Balser |
| Associate Director for Customer Support | Jonathan C. Rike | Academic Advisor, Center for Academic Success | Kathleen Hoepf |
| Associate Director for Classroom Support and Operations Engineer | Angela M. Parker | Academic Advisor, Center for Academic Success | Jamie Riley |
| Director, Curriculum Innovation and E-Learning | David J. Wright | Academic Success Coordinator | leesha Ramsey |
|  | Ryan Allen | Career Services Liaison | Sylvie Stewart |
| Systems |  | University Libraries Liaison | Joan Plungis |
| Associate Director, IT Risk | Dean S. Halter | Director, MBA Program | Janice M. Glynn |
| Management |  | Director, International Business (acting director) | Paul Sweeney |
| Associate Provost for Faculty and Administrative Affairs | Patrick G. Donnelly | Director, SBA Study Abroad | Peter G. Wagner |
| Executive Director, Institutional Diversity and Inclusion | Jack Ling | Program <br> Director, SBA Information | Arthur R. Santoianni |
| Associate Provost, Graduate Academic Affairs | Paul M. Vanderburgh | Director, L. William Crotty Center for Robert F. Chelle Entrepreneurial Leadership |  |
| Executive Director, Graduate Academic Affairs | Bradley D. Duncan | Director, Richard P. and Susan <br> P. David Center for Portfolio <br> Management | Leslie Douglas |
| Director for Special Programs and Continuing Education | Julie Mitchell |  |  |
| Assistant Director, Graduate Student Services and Graduate | Diane C. Helmick | Director, Hanley Group Derivatives Trading Center | OPEN |
| Academic Affairs |  | Director, Center for Integration of | Bro. Victor Forlani, S.M. |
| Senior Administrative Assistant, Graduate Academic Affairs | Linda M. Wallace | Firector, Fiore Talarico Center for | Tony Krystofik |
| Senior Administrative Assistant, Special Programs and Continuing Education | Gina A. Newlin | Professional Selling <br> Director, Center for Leadership and Executive Development | Robert F. Smith |
|  |  | Director, Business Research Group | Richard D. Stock |


| Director, Media Production Group | Michael R. Kurtz | Director, Education and Information Hector Escobar |  |
| :---: | :---: | :---: | :---: |
| Dean, School of Education and Kevin R. Kelly Health Sciences |  | Delivery |  |
|  |  | Director, Information Systems and Frances E. RiceDigital Access |  |
|  |  |  |  |
|  |  | Director, Marian Library | Thomas A. Thompson, S.M. |
| Director, Curriculum Materials Center | Susan Steinke | Executive Director, International Marian Research Institute (IMRI) | Francois Rossier, S.M. |
| Director, Doctoral Studies | Charles Russo | University Archivist and Coordinator Jennifer Brancato |  |
| Director, Education Field Office | Connie L. Bowman |  |  |
| Director, Publications | Vacant | ACADEMIC DEPARTMENTS |  |
| Director, School Study Council of Ohio | Angela Dicke |  |  |
|  |  | Title | Name |
| Associate Dean for Undergraduate Learning and Community Partnerships | Katie Kinnucan-Welsch | Accounting | Donna Street |
|  |  | Biology | Jayne B. Robinson |
|  |  | Chemical and Materials Engineering Charles E. Browning |  |
| Assistant Dean for Program Development | Vacant | Chemistry | Mark B. Masthay |
| Director, Bombeck Family Learning Center | Shauna Adams | Engineering and Engineering Mechanics | Don Chase |
| Academy | Rochonda L. Nenonene | Communication | Jonathan A. Hess |
| Director, Accreditation Office | Pamela Cross Young | Counselor Education and Human | Dale Courte |
| Director, Research | Barbara DeLuca |  | Molly A. Schaller |
| Director, Center for Catholic Education | Susan M. Ferguson | Economics and Finance | Trevor Collier |
| Dean, School of Engineering | Tony E. Saliba | Educational Leadership | David A. Dolph |
| Associate Dean for Graduate Studies | John Weber | Engineering | Guru Subramanyam |
| Associate Dean for Undergraduate Studies | Riad Alakkad | Engineering Management and Systems | Edward Mykytka |
| Assistant Dean for Recruitment and | OPEN | Engineering Technology | Scott Schneider |
| Outreach |  | English | Shelia Hassell-Hughes |
| Manager, Engineering Computing and Information Services | Maurice Riggins | Geology | Daniel Goldman |
|  |  | Health and Sport Science | (Interim) Lloyd L. Laubach |
| Manager, Innovation center | Dr. Kenneth Bloemer | History | Juan Santamarina |
| Dean, School of Law | Paul E. McGreal | Languages | Francisco Penas-Bermejo |
| Associate Dean, Academic Affairs | Maria Crist | Management and Marketing | Terence Lau |
| Director of Operations and Finance | Margaret Wilson | MIS, Operations and Supply Management and Decision Sciences | E. James Dunne |
| Registrar | Shannon Penn |  |  |
| Information Technology Coordinator Jaime Beasley |  |  |  |
| Assistant Dean, Student Affairs | Staci Rucker | Mathematics | Joe D. Mashburn |
| Assistant Director of Communication | Denise Baker | Mechanical and Aerospace Engineering | J. Kelly Kissock |
| Assistant Dean and Executive Director of Enrollment Management and Marketing | Claire Schrader | Military Science | Daniel R. Redden |
|  |  | Music | Sharon D. Gratto |
|  |  | Philosophy | John A. Inglis |
| Assistant Dean and Director, CareerServices | Timothy G. Swensen | Physics | John Erdei |
|  |  | Political Science | Jason Pierce |
| Director, Law Library | Susan Elliott | Psychology | Carolyn Roecker Phelps |
| Dean, University Libraries | Kathleen M. Webb | Religious Studies | Daniel Thompson |
| Associate Dean for Collections and Operations | Fred W. Jenkins | Sociology, Anthropology, and Social Laura Leming, F.M.I. Work |  |
| Director, Information Acquisition and Organization | Emily A. Hicks | Teacher Education Visual Arts | Connie L. Bowman |
|  |  |  | Judith L. Huacuja |

## academic programs

| Title | Name |
| :--- | :--- |
| American Studies | Vacant |
| CORE | Willaim Trollinger |
| Criminal Justice Studies | Arthur J. Jipson |
| Dietetics | Vacant |
| Doctor of Physical Therapy | Philip A. Anloague |
| Electro-Optics | Partha Banerjee |
| Human Rights Studies | Natalie Hudson |
| International Studies | Marybeth Carlson |
| Prelaw | Laura Hume |
| Premedical Programs | Kathy Scheltens |
| Theatre | Darrell F. Anderson |
| Women's and Gender Studies | Rebecca S. Whisnant |

## university libraries

| Title | Name |
| :---: | :---: |
| Dean, University Libraries | Kathleen M. Webb |
| Director, Education \& Information Delivery | Hector Escobar |
| Director, Information Systems and Digital Access | Fran Rice |
| Coordinator, Access Services | Amanda Black |
| Coordinator, Reference and Instruction | Heidi Gauder |
| Associate Dean for Collections and Operations | Fred W. Jenkins |
| Director, Information Acquisition and Organization | Emily A. Hicks |
| University Archivist and Coordinator of Special Collections | Jennifer Brancato |
| Director, Marian Library | Thomas A. Thompson, S.M. |
| Executive Director, Marian Library, International Marian Research Institute (IMRI) | Francois Rossier, S.M. |
| research |  |
| Title | Name |
| Vice President for Research and Executive Director, Research Institute | Michael V. McCabe |
| Director, Research Institute | John E. Leland |
| Associate Director, Research Institute | Allan S. Crasto |
| Division Head, Aerospace Mechanics | Michael P. Bouchard |
| Division Head, Energy and Environmental Engineering | OPEN |
| Division Head, Energy Technologies \& Materials | Sukhjinder Sidhu |
| Division Head, Multiscale Composites and Polymers | Brian P. Rice |
| Division Head, Nonstructural Materials | Susan S. Saliba |


| Division Head, Structural Integrity | John J. Ruschau |
| :--- | :--- |
| Division Head, Sensor Systems | Larrell B. Walters |
| Head, Sustainment Technologies <br> Integration Office | David K. Calder |
| Director, Contracts and Grants | Claudette M. Groeber |
| Administrator, Purchasing Agent <br> and Property | Jon J. Borgwardt |
| Controller |  |
| Manager, Information Technologies | D. Kiefer Campbell |
| Director, Technology Partnerships | Matthew E. Willenbrink |
| Communication Administrator | Pamela L. Gregg |

## campus ministry

| Title | Name |
| :---: | :---: |
| Director | Crystal C. Sullivan |
| Associate Director of Campus Ministry, Residence Life Ministry and GA Program | Kelly Adamsont |
| Associate Director of Campus Ministry, Center for Social Concern | Nicholas Cardilino |
| Assistant Director of Campus Ministry, Retreats and Faith Communities | Allison Leigh |
| Assistant Director of Campus Ministry, Liturgy | Kathy Sales |
| Campus Minister | Mike Bennett |
| Campus Minister | Kelly Bohrer |
| Campus Minister | Colleen Brown |
| Campus Minister | Maria O. Burkett |
| Campus Minister | Gerald Chinchar, S.M. |
| Campus Minister | Teri Dickison |
| Campus Minister | Bridget Ebbert |
| Campus Minister | Lauren Farrell |
| Campus Minister | Katrina Hamilton |
| Campus Minister | Rev. LaKendra Hardware, Ph.D. |
| Campus Minister | Linda L. Jackson, O.P. |
| Campus Minister | Steve Joebgen |
| Campus Minister | Michelle Khawam |
| Campus Minister | Terri Lauer |
| Campus Minister | Jen Morin Williamson |
| Campus Minister | Katie Mathews |
| Campus Minister | Elizabeth Montgomery |
| Campus Minister | Mary Neibler |
| Campus Minister | James Pera |
| Campus Minister | Thomas Pieper, S.M. |
| Campus Minister | Krystle Powell |
| Campus Minister | Kathleen Rossman, O.S.F. |
| Campus Minister | Logan Rudemiller |
| Campus Minister | Colleen Ryan |
| Campus Minister | Sue Terbay |

## finance and administrative services

| Title | Name |
| :---: | :---: |
| Vice President for Finance and Administrative Services | Thomas E. Burkhardt |
| Controller | Angela K. Buechele |
| Internal Auditor | Cindy Ryan |
| Assistant Vice President and Treasurer | Philip G. Chick |
| Assistant Treasurer and Tax Manager | Ann Garcia |
| Assistant Vice President for Finance | Thomas J. Weckesser |
| Director, Student Accounts and Bursar | Beth Gloekler |
| Director, Purchases and Business Services | Ken R. Soucy |
| Vice President for Facilities Management | Beth H. Keyes |
| Director, University Campus Planning | Richard G. Perales |
| Director, Legal Affairs and University Counsel | Mary Ann Poirier |
| Director, Institutional Reporting | Susan Sexton |
| Vice President for Human Resources | Joyce M. Carter |
| Director, Dining Services | Paula H. Smith |
| Executive Director, Public Safety and Chief of Police | Bruce E. Burt |
| Human Resources |  |
| Title | Name |
| Vice President for Human Resources | Joyce M. Carter |
| Administrative Associate to the Vice President | Kathryn A. Henry |
| Assistant Vice President of Human Resources | Andrea L. Zavakos |
| Manager, Human Resources Operations | Steven D. Perucca |
| Manager, Learning and Development | Celine M. O'Neill |
| Director, Employee \& Labor Relations | M. Lee Jackson |
| Manager, Benefits | Elizabeth A. Schwartz |
| Benefits Coordinator | Teresa Hansen |
| Manager, Compensation | Anthony Linz |
| Manager, Employment \& Risk Services | Jennifer G. Duwel |
| Director, Human Resources Information Systems | Noyra C. Valentin |
| HRIS Analyst | Stefanie M. Rich |

## student development

| Title | Name |
| :---: | :---: |
| Vice President for Student Development | William M. Fischer |
| Sr. Administrative Assistant | Annette Mitchell |
| Associate Vice President for Student Development and Dean of Students | Christine Schramm |
| Assistant Vice President for Health/ Wellness Promotion and Director of the Counseling Center | Steven D. Muller |
| Assistant Vice President for Student Development | Cari S. Wallace |
| Assistant Dean of Students and Executive Director of Housing and Residence Life | Steven T. Herndon |
| Assistant Director of Residence Life, East Campus | Trent Pinto |
| Director of Residence Life | Christina Smith |
| Assistant Director of Residence Life, West Campus | OPEN |
| Associate Director of Housing Operations | Jim Froehlich |
| Associate Dean of Students and Director of Community Standards and Civility | Debra P. Monk |
| Assistant Director, Community Standards and Civility | Amanda Pollack |
| Conduct Coordinator of Community Standards and Civility | Jessica Hoelting |
| Assistant Dean of Students and Director of Multicultural Affairs | Patricia L. Alvarez |
| Assistant Director of Multicultural Affairs and Leadership Initiatives | Daria Y. Graham |
| Assistant Director for Student Services | Carols T. Stewart |
| Director, Student Life and Kennedy Union | Amy D. Lopez-Matthews |
| Assistant Director, Student Life | Patrick Chenault |
| Associate Director, Kennedy Union | Leanard A. Presock |
| Night Operations Manager | Allison Moon |
| Associate Director, Student Life | Gwyn F. Stump |
| Associate Director, Kennedy Union | Amy V. Lee |
| Assistant Director, Student Life and Kennedy Union | Christopher Johnson |
| Assistant Director, Kennedy Union | Brandy A. Clifford |
| Director, New Student Programs | Re'Shanda Grace-Bridges |
| Director, Greek Life and Leadership Programs | Kevin M. Cane |
| Assistant Director, Greek Life and Leadership Programs | Jimmy McLeod |
| Assistant Director, New Student Programs | Melissa T. Flanagan |
| Director, Campus Recreation | Melissa Longino |


| Sr. Associate Director, Operations and Assessment | David B. Ostrander |
| :---: | :---: |
| Assistant Director, Facility and Member Services | Mark A. Hoying |
| Assistant Director, Aquatics and Event Services | Amanda Rupp |
| Assistant Director, Adventure <br> Recreation and Camps | Emily Wilk |
| Associate Director, Business Operations and Student Development | Donn W. Shade |
| Assistant Director, Fitness and Marketing | Johnny Chase |
| Medical Director, University Health Center | Mary P. Buchwalder, M.D. |
| Assistant Dean of Students and Director of Community Wellness Services | OPEN |
| Associate Director of the Counseling Center | Rebecca Cook |
| Assistant Director, Counseling Center | Erin W. Shiner |
| Director, Communications and Community Relations | Edel M. Jesse |
| Director, Information Technology | Brian S. Turner |
| Technology Support Specialist | Chris Wagner |
| Director of Budgets and Financial Operations | Nancy Stork |
| Coordinator of Assessment and Planning | Justin Keen |

## university advancement

| Title | Name |
| :--- | :--- |
| Vice President for University | David Harper |
| Advancement |  |
| Executive Assistant to the Vice <br> President | Karla T. Brooks |
| Associate Vice President for | Christopher Morrison |
| University Advancement <br> Executive Director for Corporate | Derrick Dukes |
| Fund |  |
| Executive Director Advancement <br> Relations <br> Executive Director University | Ddanna Grant |
| Events |  |

## athletic programs and facilities

| Title | Name |
| :--- | :--- |
| Vice President/Director of Athletics | Tim Wabler |
| Assistant to the Vice President/ | Debbie Seaman |
| Director of Athletics |  |
| Assistant Vice President of | Tim O'Connell |
| Athletics/ Director of UD Arena and |  |
| Arena Sports Complex |  |


| Assistant Vice President of Athletics/Sports Program Administration | Mike Kelly |
| :---: | :---: |
| Associate Director of Athletics | Neil Sullivan |
| Associate Director of Athletics/ Director for Athletic Performance | Joe Owens |
| Assistant Director of Athletics for Compliance and Finance/Senior Woman Administrator (SWA) | Angie Petrovic |
| Assistant Director of Athletics for Corporate Development | Rob Poteat |
| Assistant Director of Athletics for Sports Media Relations \& Information | Krystal Warren |
| Assistant Director of Athletics for Multimedia | Michael LaPlaca |
| Assistant Director of Athletics/ Frericks Center Equipment and Transportation | Ken Keck |
| Assistant Director of Athletics for Ticketing | Adam Tschuor |
| Director of Business and Student Services | Angie Russell |
| Director, Sports Information | Doug Hauschild |
| Director, Athletics/Development | Brian Tracy |
| Manager, Champions and Scholars Fund | OPEN |
| Assistant Director of Marketing/ Game Operations and Spirit | Adrienne Green |
| Assistant Director, Communications | Jenna Willhoit |
| Assistant Director, Communications | Ross Bagienski |
| Academic Counselor | Elizabeth Flach |
| Academic Counselor | Vera Gomes |
| Academic Counselor | Heather Hogan |
| Learning Specialist | Jenifer Gerard |
| Assistant Athletics Business Manager | Margaret Gantt |
| Faculty Athletics Representative | J. Michael O'Hare, Ph.D. |
| Basketball Strength \& Conditioning Coach | Paul Ivkovich |
| Strength \& Conditioning Coach | Mark Thobe |
| Head Baseball Coach | Tony Vittorio |
| Assistant Baseball Coaches | Matt Talarico, James Roberson |
| Men's Head Basketball Coach | Ryan "Archie" Miller |
| Assistant Men's Basketball Coaches | Allen Griffin, Kevin Kuwik, Tom Ostrom |
| Men's Basketball Operations Coordinator | Bill Comar |
| Assistant Coordinator, Basketball Operations | Eric Farrell |
| Women's Head Basketball Coach | Jim Jabir |
| Assistant Women's Basketball Coaches | Adeniyi Amadou, Shauna Green, Camryn Whitaker |
| Women's Basketball Operations Coordinator | OPEN |
| Men's Cross Country Coach | Rich Davis |


| Women's Cross Country Coach | Sarah Haveman |
| :--- | :--- |
| Women's Head Track \& Field | Jason Francis |
| Coach |  |
| Head Football Coach | Rick Chamberlin |
| Assistant Football Coaches | Landon Fox, Chris Ochs, Kevin |
|  | McCoy, Kevin Hoyng, Jordan |
| Softcheck, David Mendez |  |

## Research Institute Staff

Abfalter, Garry H. (1988), Senior Research Engineer - B.M.E., University of Detroit, 1968; M.S., Oklahoma State University, 1972.

Adams, Ryan K. (2009), Research Engineer - B.S., University of Dayton, 2007; M.S., 2009.

Altman, Servane S. (2003), Senior Research Engineer - B.S., Institute Polytechnique (IPSA), 1998; M.S., Cranfield College of Aeronautics, 1999.

Amama, Placidus Bepeh (2008), Research Scientist - B.S., University of Calabar, 1992; Ph.D., Yokohama National University, 2002.

Anneken, David T. (2009), Associate Research Engineer - B.S., University of Cincinnati, 2006.

Arbuckle, Nicole B. (2009), Research Scientist - B.A., Bellarmine University, 2006; M.A., University of Dayton, 2009.

Ashbrook, Phillip A. (2006), Research Engineer - B.S., University of Dayton, 2006.

Aulds, J. Michael (1975), Senior Research Engineer - B.T., University of Dayton, 1975.

Ayyadurai, Mary S. (2011), Senior Materials Scientist-B.S., Stella Maris College, 1985; M.S. Loyola College, 1987; Ph.D., Indian Institute of Technology, 1992.

Bachman, Kristen M. (2012), Associate Software Engineer - B.S., Miami University, 2012; M.S., 2012.

Back, Tyson C. (2012), Research Engineer - B.S., West Texas A\&M University, 1998; M.S., 2000; Ph.D., University of Dayton, 2010.

Bai, Zongwu (2003), Senior Research Scientist - B.S., Hebei University of Technology, 1983; M.S., 1988; Ph.D., Beijing University, 1995.

Barklay, Chadwick D. (2007), Group Leader-Distinguished Research Scientist - B.S., Wright State University, 1987; M.S., University of Dayton, 2004; Ph.D., 2007.

Beblo, Richard V. (2010), Research Engineer - B.S., Bucknell University, 2003; M.S., University of Pittsburgh, 2007; Ph.D., 2010.

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Benincasa, Joseph M. (2011), Research Cognitive Scientist - B.A., University of Rochester, 2011.

Bergman, Anthony J. (2003), Research Engineer - B.S., University of Dayton, 2001; M.S., 2005.

Black, Brady (2008), Associate Image Process Engineer - B.S.E.T., University of Dayton, 2008.

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Blanchard, Robert E. (1977), Senior Research Engineer - B.S., Rensselaer Polytechnic Institute, 1975; M.S., Rochester Institute of Technology, 1977.

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Boehle, Matthew C. (2009), Associate Research Engineer - B.S., University of Dayton, 2007.

Boehnlein, Thomas R. (2003), Research Software Engineer - B.S., Wright State University, 2003.

Bogle, Andrew E. (2010), RF Electromagnetics Engineer - B.S., Michigan State University, 2001; M.S., 2004; Ph.D., 2007.

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Bouchard, Michael P. (1981), Division Head-Aerospace Mechanics - B.S., University of Dayton, 1981; M.S., 1986.

Bouchendouka-Ouchen, Fahima (2011), Research Engineer - B.S., University of Setef, 1991; M.S., University of Montpellier, 1992; Ph.D., 1996.

Bowen, Loryn L. (2005), Research Biologist - B.S., Oklahoma State University, 1998.

Bowers, Drew M. (2007), Research Psychologist - B.S., University of Dayton, 2005; M.A., 2007.

Bowman, Daniel R. (1985), Group Leader-Distinguished Research Engineer - B.S., University of Dayton, 1985; M.S., 1988.

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Johnson, Douglas J. (2011), Associate Research Engineer - B.S., Kent State University, 2006; M.S., University of Dayton, 2010.

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Kerschner, Thomas E. (2010), Research Materials Scientist - B.S., Wright State University, 1977.

Kessler, Donald J. (2010), Senior Scientist, Autonomous NavigationB.S., United States Air Force Academy, 1982; M.S., Wright State University, 2005; Ph.D., 2005.

King, Robert D. (1991), Senior Research Engineer - B.S., University of Dayton, 1996.

Klawon, Kevin T. (2008), Group Leader Image Processing Engineer.
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Klosterman, Donald A. (2002), Senior Polymer Engineer - B.S., University of Dayton, 1989; M.S., 1991; Ph.D., 1994.

Ko, Ray T. (2000), Research Engineer - B.S., National Cheng-Hsing University, 1978; M.S., Ohio State University, 1983; Ph.D., 1993.

Kordik, Andrew M. (2009), Associate Image Processing Engineer - B.S., University of Dayton, 2010.

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Kramer, Daniel P. (2004),Distinguished Research Engineer- B.S., Rutgers University, 1974; M.S., Massachusetts Institute of Technology, 1976; M.S., Rutgers University, 1979; Ph.D., 1979.

Kramer, Jeffrey P. (2011), Associate Research Analyst - B.A., Indiana University, 2009; M.S., Pennsylvania State University, 2011.

Krishnan, Anupriya (2009), Associate Research Engineer - B.S., University of Madras, 2004; M.S., University of Dayton, 2006; M.S., 2008.

Kuhlman, Sarah J. H. (2005), Research Engineer - B.S., University of Dayton, 2001.

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Kumar, Jitendra (2007), Research Chemist - B.S., T. M. Bhagalpur University, 1996; M.S., 1999; Ph.D., University of Delhi, 2007.

Landis, Gerald R. (1988), Research Engineer - B.S., Wright State University, 1993.

Lanese, Paul A. (2011), Business Systems Analyst- B.S., Wright State University, 1992; B.S., 1995.

Lauwers, William G. (2013), Research Engineer - B.S., Worcester Polytechnic Institute, 2009.

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Leontsev, Serhiy O. (2011), Associate Research Scientist- B.S., Cherkasy State University, 2002; M.S., University of Kentucky, 2005; Ph.D., 2011.

Lewis, William K. (2007), Senior Research Chemist - B.S., West Virginia University, 2000; Ph.D., University of North Carolina, 2005.

Li, Lingchuan (2004), Research Engineer - B.S., University of Science and Technology Beijing, 1987; M.S., 1989; Ph.D., 1994.

Little, Brian K. (2012), Research Chemist - B.S., Valdosta State University, 2000; M.B.A., Georgia Southern University, 2004; Ph.D., Auburn University, 2011.

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DeAloia, Leah (2005), English, Lecturer - B.A., Miami University, 1969; M.A., 1976; Ph.D., University of Michigan, 1981.

DeAnda, Neomi D. (2013), Religious Studies, Assistant Professor - B.A., St. Mary's University, 1997; M.A., 1999; M.A., Oblate School of Theology, 2005; Ph.D., Loyola University, 2011.

De Luca, Barbara M. (1975), Educational Leadership, Associate Professor - B.S., University of Dayton, 1971; M.Ed., Miami University, 1975; Ph.D., Ohio State University, 1984.

DeMarco, Jr. George M. (1997), Health and Sport Science, Associate Professor - B.S., Bridgewater State College, 1978; M.S., Ithaca College, 1992; Ed.D., University of Georgia, 1998.

Demmitt, Alan (1996), Counselor Education and Human Services, Associate Professor - B.Th., Atlanta Bible College, 1982; M.A., Northeast Louisiana University, 1991; Ph.D., Iowa State University, 1994.

DesAutels, Peggy J. (2001), Philosophy, Professor - B.A., Principia College, 1977; M.S., Washington University, 1988; M.A., 1993; Ph.D., 1995.

Detrio, John A. (1988), Electro-Optics, Associate Professor - B.S., Spring Hill College, 1959; M.S., University of Alabama, 1961.

Diaz, Marian K. (2012), Religious Studies, Lecturer - B.A., University of Notre Dame, 1991; M.A., Catholic Theological Union, 1996; D. Min., Barry University, 2003

Diaz, Miguel H. (2012), Religious Studies, Professor \& University Professor of Faith and Culture - M.A., University of Notre Dame, 1992; Ph.D., University of Notre Dame, 2000.

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Diestelkamp, Wiebke S. (1998), Mathematics, Associate Professor M.S., University of Wisconsin-Milwaukee, 1992; Ph.D., 1998.

Dixon, Lee (2009), Psychology, Assistant Professor - B.A., Western Kentucky University, 2000; M.A., 2002; Ph.D., University of Tennessee Knoxville, 2009.

Dodd, Gloria F. (2011), Roesch Library, International Marian Research Institute, Lecturer - B.A., Christendom College, 1987; M.Div., Dominican House of Studies, 1990; S.T.L., Dominican House of Studies, 1993; D.S.T., International Marian Research Institute, 2011.

Doench, Meredith (2010), English, Lecturer - B.S., Ball State University, 1998; M.A., University of Dayton, 2003; Ph.D., Texas Tech University, 2007.

Dolph, David (2005), Educational Leadership, Assistant Professor B.S., University of Dayton, 1970; M.S., Xavier University, 1973; Ph.D., University of Dayton, 1994

Dominguez Navarro, David (2013), Global Languages and Cultures, Lecturer - B.A., University of Valladolid, 1999; M.A., 2001; M.A., Western University, 2009; Ph.D., 2013.

Donahoe-Fillmore, Betsy K. (2006), Health and Sport Science, Associate Professor - B.S., Ohio State University, 1988; M.S., University of Indianapolis, 1992; Ph.D., Union Institute and University, 2002.

Donaldson, Steven L. (2006), Civil and Environmental Engineering and Engineering Mechanics, Associate Professor - B.S., Purdue University, 1981; M.S., University of Dayton, 1987; Ph.D., Stanford University, 1993.

Donnelly, Patrick G. (1979), Sociology, Anthropology, and Social Work, Professor - B.S., St. Joseph's College, 1974; M.A., University of Delaware, 1977; Ph.D., 1981.

Dorf, Samuel N. (2010), Music, Assistant Professor - B.A., Boston University, 2002; B.M., 2002; M.A., Tufts University, 2004; Ph.D., Northwestern University, 2009.

Doty, John H. (2008), Engineering Management and Systems, Associate Professor - B.S., Clarkson University, 1980; B.S., Air Force Institute of Technology, 1984; M.S., 1995; Ph.D., Purdue University, 1999.

Doyle, Dennis M. (1984), Religious Studies, Professor - B.A., LaSalle College, 1974; M.A., Ohio University, 1978; M.A., Catholic University of America, 1980; Ph.D., 1984.

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Fischer, Marilyn R. (1992), Philosophy, Professor - B.A., Wheaton College, 1971; M.A., Boston University, 1975; Ph.D., 1978.

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Fleischmann, Ellen L. (1998), History, Associate Professor - B.A., Wesleyan University, 1977; Ph.D., Georgetown University, 1996.

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Gold, Scott A. (2010), Chemical and Materials Engineering, Associate Professor \& ORS Endowed Chair in Multiscale Composites - B.S., University of Kentucky, 1996; M.S., Georgia Institute of Technology, 1999; Ph.D., Arizona State University.

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Goode, Jayne R. (2011), Communication, Lecturer - B.A., Ball State University, 2002; M.A., Ball State University, 2004; Ph.D., University of Missouri, 2010.

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Gustafson, Elizabeth F. (1983), Economics and Finance, Associate Professor - B.A., Duke University, 1970; Ph.D., University of North Carolina, 1974.

Haan, Jennifer E. (2010), English, Assistant Professor - B.A., Calvin College, 1999; M.A., Purdue University, 2001; Ph.D., 2009.

Hagel, Thomas L. (1982), Law, Professor - B.S., University of Nebraska, 1972; J.D., 1976; LL.M., Temple University, 1982.

Hageman, John B. (2010), School of Engineering, Lecturer - B.S., University of Dayton, 1973.

Hall, Scott E. (1996), Counselor Education and Human Services, Associate Professor - B.S.B.A., West Carolina University, 1986; M.Ed., Ohio University, 1991; Ph.D., Ohio State University, 1994.

Hall, Stephen R. (2007), Management Information Systems, Operations Management, and Decision Sciences, Lecturer - B.S., Ohio State University, 1971; M.S., University of Dayton, 1976.

Hallinan, Charles G. (1983), Law, Professor - B.A., University of Dayton, 1969; J.D., University of Toledo, 1977; LL.M., Yale University, 1983.

Hallinan, Kevin P. (1988), Mechanical and Aerospace Engineering, Professor - B.S., University of Akron, 1982; M.S., Purdue University, 1984; Ph.D., Johns Hopkins University, 1988.

Han, Jee Hee. (2006), Communication, Associate Professor - B.A., Sogang University, 1997; M.A., 1999; M.A., University of Georgia, 2001; M.S., 2002; Ph.D., Purdue University, 2007.

Hardie, Russell C. (1993), Electrical and Computer Engineering, Professor - B.E.S., Loyola College, 1988; M.E.E., University of Delaware, 1990; Ph.D., 1992.

Haritashya, Umesh (2013), Geology, Assistant Professor - Ph.D., Indian Institute of Technology, 2005.

Harmon, Tracy (2009), Management and Marketing, Assistant Professor B.S., Florida A\&M University, 1998; M.B.A., Rollins College, 2002; Ph.D., University of Florida, 2007.

Harrison, William B. (2010), Mathematics, Lecturer - B.A., Carleton College, 1974; M.S.T., University of Chicago, 1976.

Harrod, Steven (2007), Management Information Systems, Operations Management, and Decision Sciences, Assistant Professor - B.S., Trinity College, 1989; M.S., Massachusetts Institute of Technology, 1993; M.S., University of Cincinnati, 2005; Ph.D., 2007.

Hart, Elizabeth S. (2011), School of Engineering, Lecturer - B.Ch.E., University of Dayton, 1991; M.Sc., 1992.

Hart, Patricia M. (1988), Teacher Education, Professor - B.S., University of Dayton, 1973; M.S., 1983; Ph.D., Ohio State University, 1989.

Hartley, Linda A. (1991), Music, Professor - B.M., Bowling Green State University, 1979; M.M., Kent State University, 1987; Ph.D., 1991.

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Haus, Joseph W. (1999), Electro-Optics, Professor - B.S., John Carroll University, 1971; M.S., 1972; Ph.D., Catholic University of America, 1974.

Heitmann, John A. (1984), History, Professor - B.S., Davidson College, 1970; M.A., Clemson University, 1974; Ph.D., Johns Hopkins University, 1983.

Henderson, Kathleen D. (1982), Ryan C. Harris Learning Teaching Center, Administrative - B.S., University of Dayton, 1986; M.S., 1993.

Herrelko, Janet M. (1999), Teacher Education, Associate Professor B.A., Regis College, 1970; M.A., University of Maryland, 1971; Ed.D., University of Massachusetts/Lowell, 1996.

Hess, Jonathan A. (2008), Communication, Professor - B.S., Manchester College, 1989; M.A., Ohio University, 1991; Ph.D., University of Minnesota, 1996.

Hicks, Emily A. (2002), Library, Associate Professor - B.A., Transylvania University, 1991; M.L.S., University of Kentucky, 1993.

Higgins, Aparna W. (1984), Mathematics, Professor - B.Sc., University of Bombay, 1978; M.S., University of Notre Dame, 1980; Ph.D., 1983.

Hiller, James M. (2001), Music, Lecturer - B.M., Capital University, 1982; M.M.T., Temple University, 1994; Ph.D., 2011.

Hirakawa, Keigo (2009), Electrical and Computer Engineering, Assistant Professor - B.S.E., Princeton University, 2000; M.S., Cornell University, 2003; Ph.D., 2005; M.M., New England Conservatory of Music, 2006.

Hirunyawipada, Tanawat (2011), Management and Marketing, Assistant Professor - B.Eng., Chiang Mai University, 1993; M.B.A., National Institute of Development Administration, 1998; Ph.D., University of North Texas, 2007.

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Huacuja, Judith L. (2000), Visual Arts, Associate Professor - B.A., University of Houston, 1993; B.F.A., 1993; M.A., Rice University, 1995; Ph.D., University of California, Santa Barbara, 2000.

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Koziol, Andrea M. (1993), Geology, Associate Professor - B.A., Boston University, 1983; Ph.D., University of Chicago, 1988.

Krakowski, Rebecca J. (2000), Mathematics, Associate Professor - B.S., Allegheny College, 1986; M.S., North Carolina State University, 1995; Ph.D., 2000.

Krane, Carissa M. (2001), Biology, Associate Professor - B.S., Marquette University, 1990; Ph.D., Washington University, 1996.

Kreutzer, Jacob (2013), Law, Visiting Professor - B.S., University of Washington, 2000; J.D., New York University, 2006.

Krieger, Michael T. (1983), Library, Professor - B.S., Central Michigan University, 1972; M.L.S., Western Michigan University, 1976.

Krugh, Janis L. (1987), Global Languages and Cultures, Associate Professor - B.A., Ohio Northern University, 1974; M.A., University of Toledo, 1979; Ph.D., University of Pittsburgh, 1986.

Krummel, Miriamne A. (2002), English, Associate Professor - B.A., University of Connecticut, 1988; M.A., Hunter College, 1992; Ph.D., Lehigh University, 2002.

Krystofik, Anthony (2006), Management and Marketing, Lecturer - B.S., University of Dayton, 1978; M.B.A., 1982.

Kublik, Catherine M. (2013), Mathematics, Assistant Professor B.Sc., Ecole Nationale Superieure de Techniques Avancees, 2003; M.Sc., University of British Columbia, 2005; Diplome d'Ingenieur, Ecole Nationale Superieure de Techniques Avancees, 2005; Ph.D., University of Michigan, 2010.

Kumar, Binod (2006), Mechanical and Aerospace Engineering, Professor - B.S., Banaras Hindu University, 1967; M.S., Pennsylvania State University, 1973; Ph.D., 1976.

Kunz, Benjamin R. (2010) Psychology, Assistant Professor - B.S., University of Utah, 2001; M.S., 2007; Ph.D., 2010.

Kwon, Suki (2004), Visual Arts, Associate Professor - B.A., Dae Gu University, 1999; M.A., University of Iowa; M.F.A., 2003.

Lafdi, Kahlid (2001), Chemical and Materials Engineering, Professor \& WBI Endowed Chair in Nanomaterials - M.S., Nancy University, 1987; Ph.D., 1989; D.Sc., 1991.

Langhorne, Anna L. (2001), Communication, Assistant Professor - B.A., State University of New York at Buffalo, 1993; M.A., 1998; Ph.D., 2000.

Lasley, Thomas J., II (1983), Teacher Education, Professor - B.S., Ohio State University, 1969; M.A., 1972; Ph.D., 1978.

Lau, Terence J. (2002), Management and Marketing, Associate Professor - B.A., Wright State University, 1995; J.D., Syracuse University, 1998.

Laubach, Lloyd L. (1980), Health and Sport Science, Associate Professor - B.S., Central State University, 1961; M.S., University of Oregon, 1962; Ph.D., Ohio State University, 1970.

Laufer-Ukeles, Pamela (2006), Law, Professor - B.A., Columbia University, 1996; J.D., Harvard Law School, 2001.

Lawless-Frank, Catherine (2013), Teacher Education, Visiting Professor, B.S., University of Dayton, 1990; M.S., 1997; Ed.D., University of Cincinnati, 2004.

Lee, C. William (1982), Chemical and Materials Engineering, Professor B.S., National Taiwan University, 1976; M.S., University of Akron, 1979; Ph.D., Ohio State University, 1982.

Lehman, Jeff (2013), Music, Lecturer - B.Ed., Missouri State University, 2003; M.M.A., University of Memphis, 2005;

Leming, Laura M., F.M.I. (1999), Sociology, Anthropology, and Social Work, Associate Professor - B.A., St. Mary's University of San Antonio, 1979; M.A., University of Dayton, 1987; Ph.D., Boston College, 1999.

Leslie, James M. (2006), Music, Artist in Residence - B.M.Ed., Central Michigan University, 1994.

Li, Xiaoli (2012), English, Assistant Professor - B.A., Xi'an Foreign Language University, 1992; M.A., Bowling Green State University, 2002; Ph.D., Clemson University, 2011.

Linderman, Jon K. (2000), Health and Sport Science, Associate Professor - B.A., California State University, 1984; M.A., 1987; Ph.D., University of California, 1991.

Liu, Ruihua (2004), Mathematics, Associate Professor - B.E., Nankai University, 1985; M.E., 1988; Ph.D. (Engineering), 1994; M.S., University of Georgia, 2001; Ph.D. (Mathematics), 2002.

Litka, Stephanie J. (2011), Sociology, Anthropology and Social Work, Lecturer - B.A., University of Florida, 2001; M.A., University of Florida, 2004.

Livesay, Alisa (2007), Economics and Finance, Lecturer - B.A., University of Dayton, 1992; M.A., St. Louis University, 1997.

Lockwood, Kimberly (2006), Philosophy, Lecturer - B.A., University of Dayton, 1991; M.A., University of Cincinnati, 1995; Ph.D., 2005.

Longazel, Jamie G. (2011), Sociology, Anthropology and Social Work, Assistant Professor - B.A., Bloomsburg University of Pennsylvania, 2005; M.A., University of Delaware, 2007; Ph.D., University of Delaware, 2011

Loomis, John S. (2002), Electrical and Computer Engineering, Associate Professor - B.S., Case Institute of Technology, 1966; M.S., University of Illinois, 1968; M.S., University of Arizona, 1977; Ph.D., 1980.

Lopper, Matthew (2007), Chemistry, Associate Professor - B.A., University of Dayton, 1998; Ph.D., University of Wisconsin, 2003.

Mackay, Elizabeth (2010), English, Lecturer - B.S., Appalachian State University, 1996; M.A., 2001; Ph.D., Miami University, 2007.

MacLachlan, Heather (2009), Music, Assistant Professor - B.M.A., University of Manitoba, 1995; B.E., 1995; M.A., Cornell University, 2007; Ph.D., 2009.

Macleod, Alex (2009), English, Lecturer - B.A., University of Arizona, 1991; M.A., 1993; Ph.D., 2001.

Magnuson, Phillip C. (1981), Music, Professor - B.A., Duke University, 1971; M.M., University of Massachusetts, 1974; D.M.A., University of Wisconsin, 1977.

Mahoney, Colleen E. (2011), Roesch Library, Lecturer - B.A., University of Notre Dame, 2007; M.L.S., Simmons College, 2010.

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Majka, Theo J. (1983), Sociology, Anthropology, and Social Work, Professor - B.S., College of William and Mary, 1969; M.A., University of California, 1972; Ph.D., 1978.

Mammana, Angela (2011), Chemistry, Assistant Professor - Ph.D., Universita degli Studi di Catania, 2008.

Marcinowski, M. Gary, S.M. (1993), Visual Arts, Associate Professor B.F.A., Boston University, 1980; M.F.A., Rhode Island School of Design, 1993.

Marre, Katy E. (1966), English, Professor - B.A., University of Bombay, 1958; M.A., 1960; Ph.D., State University of New York at Buffalo, 1967.

Martin, Elizabeth S. (2004), English, Lecturer - B.A., Carnegie Mellon University, 1978; M.A., University of Dayton, 1982.

Marvin, William C. (2002), Philosophy, Lecturer - B.A., Kent State University, 1977; M.A., University of Dayton, 1991.

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Masthay, Mark (2006), Chemistry, Associate Professor - B.A., University of California, San Diego, 1978; M.S., University of California, Riverside, 1984; Ph.D., Carnegie Mellon University, 1988.

Mathes, Constance R. (1989), Teacher Education, Clinical Faculty - B.A., Wright State University, 1973; M.Ed., 1980.

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McCombe, John P. (2001), English, Professor - B.S., University of Pittsburgh, 1987; M.A., 1996; Ph.D., Ohio State University, 2000.

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McCutcheon, James R., III (1997), Music, Artist-in-Residence - B.S., University of Dayton, 1973; B.M., Wright State University, 1978; M.M., 1991.

McEwan, Ryan (2008), Biology, Assistant Professor - B.S., University of Kentucky, 1999; M.S., 2002; Ph.D., Ohio University, 2006.

McGreal, Paul E. (2011), Law, Professor - B.A., Williams College, 1989; J.D., Southern Methodist University, 1992; LL.M., Yale, 1994.

McGrew, Allen J. (1995), Geology, Associate Professor - B.A., Earlham College, 1983; M.S., Stanford University, 1987; Ph.D., University of Wyoming, 1992.

McLeod, Alexus (2009), Philosophy, Assistant Professor - B.A., University of Maryland, 2002; M.A., University of Oklahoma, 2005; Ph.D., University of Connecticut, 2009.

Meek, William (2009), Management and Marketing, Assistant Professor B.S., Bradley University, 2003; M.B.A., 2004.

Merithew, Caroline A. (2002), History, Associate Professor - B.A., University of Missouri, 1990; M.A., University of Illinois at UrbanaChampaign, 1994; Ph.D., 2000.

Merriman, Harold L. (2006), Health and Sport Science, Associate Professor - B.A., Atlantic Union College, 1982; Ph.D., Loma Linda University, 1990; M.P.T., Andrews University, 1997.

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Miller, Nancy A. (2002), Political Science, Associate Professor - B.A., Clemson University, 1995; M.A., Rice University, 2000; Ph.D., 2002.

Miller, Sheila (2004), Law, Professor of Lawyering Skills - B.A., Miami University, 1983; J.D., University of Cincinnati, 1987.

Miller, Tracy K. (2002), Management and Marketing, Lecturer - B.S.B.A., Ohio State University, 1985; M.L.H.R., 1986.

Miller, Vincent (2009), Religious Studies, Professor \& Gudorf Chair in Catholic Theology- M.A., University of Notre Dame, 1990; Ph.D., 1997.

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Monk, Debra P. (1999), Residential Programs, Administrative - B.A., University of North Carolina at Charlotte, 1993; M.A., University of Dayton, 1995.

Montoya, R. Matthew (2008), Psychology, Assistant Professor B.A., University of California, Berkeley, 1996; M.A., University of Massachusetts/Dartmouth, 1998; Ph.D., University of North Carolina at Chapel Hill, 2004.

Moon, Donald L. (1974), Electrical and Computer Engineering and Electro-Optics, Professor - B.S.E.E., West Virginia Institute of

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Morgan, Thomas L. (2006), English, Associate Professor - B.A., University of Oregon, 1993; M.A., University of Buffalo, 1999; Ph.D., 2004.

Morman, Paul J. (1990), History, Professor - B.A., University of Dayton, 1965; M.A., Bowling Green State University, 1966; Ph.D., Pennsylvania State University, 1973; M.S., State University of New York at Binghamton, 1984.

Morris III, Willie L. (1993), Music, Associate Professor - B.M.E., East Carolina University, 1982; M.A., Stephen F. Austin State University, 1984; D.M.A., University of Missouri at Kansas City Conservatory of Music, 1996.

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Mosser, Kurt (1992), Philosophy, Associate Professor - B.A., Southern Methodist University, 1979; M.A., University of Chicago, 1982; Ph.D., 1990.

Moulin, Eugene K. (1968), Counselor Education and Human Services, Professor - B.A., Mount Union College, 1956; M.E., Kent State University, 1959; Ph.D., University of Toledo, 1968.

Mueller, Steven D. (1976), Counseling Center, Administrative - B.A., University of Dayton, 1974; M.A., 1976; Ed.D., University of Cincinnati, 1987.

Mueller-Hansen, Karolyn (2009), Biology, Assistant Professor - B.S., Pennsylvania State University, 1980; M.S., Drexel University, 1984; Ph.D., University of Delaware, 1990.

Mundew, Leslie M. (2002), Economics and Finance, Lecturer - B.S., Ohio State University, 1979; M.B.A., Harvard University, 1984.

Murray, Andrew P. (1996), Mechanical and Aerospace Engineering, Professor - B.S., Rose-Hulman Institute of Technology, 1989; M.S., University of California, Irvine, 1993; Ph.D., 1996.

Mykytka, Edward F. (1998), Engineering Management and Systems, Professor - B.S., University of Dayton, 1976; M.S., University of Iowa, 1978; Ph.D., University of Arizona, 1983.

Myszka, David H. (1989), Mechanical and Aerospace Engineering, Associate Professor - B.S.M.E., State University of New York at Buffalo, 1985; M.S.M.E., 1989; M.B.A., University of Dayton, 1996; Ph.D., 2009; Reg. Prof. Engr.

Neeley, Grant (2005), Political Science, Associate Professor - B.A., Texas A\&M University, 1989; M.P.A., 1991; Ph.D., University of Tennessee, 1996.

Neiheisel, Steven R. (2013), Political Science, Lecturer - B.A., Xavier University, 1981; M.B.A., 1982; Ph.D., Washington University, 1990.

Nenonene, Rochonda (2007), Teacher Education, Clinical Faculty - B.S., Baldwin-Wallace College, 1992; M.A., University of Dayton, 1998; Ph.D., 2007.

Nickell, Philip K. (2011), Biology, Lecturer - B.S., Wright State University, 2002; M.S., Wright State University, 2004; Ph.D., University of Notre Dame, 2011.

Nielsen, Mark G. (2001), Biology, Associate Professor - B.A., Oberlin College, 1988; Ph.D., Stanford University, 1994.

Ober, Shirley J. (2000), Mathematics, Lecturer - B.S., Edinboro University of Pennsylvania, 1970; M.A., State University of New York at Buffalo, 1972.

Oberlander, Judith (1987), Institute for Technology-Enhanced Learning, Administrative - B.A., University of Dayton, 1969; M.S., 1987; Ph.D., 2002.

O'Gorman, John M. (1999), Library, Associate Professor - B.A., Walsh University, 1981; M.L.S., St. John's University, 1983.

Oh, Kyoungrae (2006), Communication, Lecturer - B.A., Sogang University, 1995; M.A., 1998; M.S., University of Georgia, 2003; ABD, Purdue University, 2008.

Oldenski, Thomas, S.M. (1994), Educational Leadership, Associate Professor - B.A., University of Dayton, 1972; M.Ed., Boston College, 1975; M.A., Western Michigan University, 1978; Ed.S., University of Dayton, 1984; Ph.D., Miami University, 1994.

O'Mara, Erin M. (2011), Psychology, Assistant Professor - B.A., Quinnipac Universtiy, 2003; M.A., Northern Arizona University, 2005; Ph.D., University of Tennessee, 2011.

Ordóñez, Raúl, E. (2001), Electrical and Computer Engineering, Professor - B.S., Monterrey Institute of Technology, 1994; M.S., Ohio State University, 1996; Ph.D., 1999.

Orji, Cyril (2005), Religious Studies, Associate Professor - B.A., University of Ibadan, 1990; M.Div., Dominican House of Studies, 1994; M.Ed., North Dakota State University, 2003; Ph.D., Marquette University, 2005.

Pair, Donald L. (1991), Geology, Professor - B.S., St. Lawrence University, 1983; M.Sc., University of Waterloo, 1986; Ph.D., Syracuse University, 1991.

Pan, Yue (2003), Management and Marketing, Associate Professor B.A., Tsinghua University, 1996; B.Eco., 1996; M. Eng., 1998; Ph.D., University of Georgia, 2003.

Paslaru, Viorel (2007), Philosophy, Assistant Professor - B.A., University of Bucharest, 1996; M.A., 1998; Ph.D., University of Cincinnati, 2007.

Pautz, Michelle (2008), Political Science, Assistant Professor - B.A., Elon University, 2003; M.A., Virginia Polytechnic Institute, 2005; Ph.D., 2008.

Payne, Michael A. (1977), Philosophy, Associate Professor - B.A., Xavier University, 1966; M.A., Boston College, 1970; Ph.D., University of Georgia, 1972.

Pedrotti, Leno M. (1987), Physics, Professor - B.A., Wright State University, 1981; Ph.D., University of New Mexico, 1986.

Peñas-Bermejo, Francisco J. (1991), Global Languages and Cultures, Professor - B.A., Universidad Complutense, 1984; M.A., University of Georgia, 1986; Ph.D., 1991.

Penno, Robert P. (1987), Electrical and Computer Engineering, Associate Professor - B.S.M.E., Rose-Hulman Institute of Technology, 1971;
M.S.E.E., 1984; Ph.D., University of Dayton, 1987.

Perkins, David A. (2013), Mechanical and Aerospace Engineering, Lecturer - B.S., University of Dayton, 2003; Ph.D., 2011.

Perna, Richard P. (1982), Law, Professor - B.A., Villanova University, 1971; J.D., 1975.

Perugini, Saverio, Jr. (2004), Computer Science, Associate Professor B.S., Villanova University, 1998; M.S., Virginia Polytechnic Institute and State University, 2001; Ph.D., 2004.

Peters, Jonathan (2013), Communication, Assistant Professor - B.S., Ohio University, 2007; J.D., The Ohio State University, 2010; Ph.D., University of Missouri, expected August 2013.

Petrykowski, John C. (1985), Mechanical and Aerospace Engineering, Associate Professor - B.S., University of Wisconsin, 1975; M.S., University of Illinois, 1978; Ph.D., 1981.

Phelps, Kyle (2002), Visual Arts, Associate Professor - B.S., Ball State University, 1996; M.F.A., University of Kentucky, 2000.

Picca, Leslie (2005), Sociology, Anthropology, and Social Work, Associate Professor - B.A., Mary Washington College, 1997; M.A., University of Florida, 2000; Ph.D., 2004.

Pici, Joseph R. (1965), English, Professor - B.S., University of Dayton, 1962; M.A., 1964.

Pierce, Jason L. (2002), Political Science, Associate Professor - B.A., Southwestern University, 1994; Ph.D., University of Texas-Austin, 2002.

Pinnell, Margaret F. (2000), Mechanical and Aerospace Engineering, Associate Professor - B.M.E., University of Dayton, 1988; M.S., 1988; Ph.D., 1995.

Pitychoutis, Pothitos (2013) Biology, Assistant Professor - B.Sc., National \& Kapodistrian University of Athens, 2005; M.Sc., 2010; Ph.D., 2010.

Plungis, Joan (2006), Library, Associate Professor - B.A., Ohio State University, 1974; M.A., Case Western Reserve University, 1977; M.L.S., Indiana University, 1988.

Poe, Danielle M. (2001), Philosophy, Associate Professor - B.A., Seattle University, 1995; M.A., Catholic University, Belgium, 1997; Ph.D., Fordham University, 2001.

Poitras, Marc A. (1998), Economics and Finance, Associate Professor B.A., University of Massachusetts/Dartmouth, 1989; M.A., George Mason University, 1991; Ph.D., 1995.

Polanski, Patricia J. (1998), Counselor Education and Human Services, Associate Professor - B.A., University of Akron, 1979; M.Ed., Ohio University, 1987; Ph.D., University of North Carolina at Greensboro, 1998.

Polzella, Donald J. (1972), Psychology, Professor - B.A., University of Rochester, 1967; M.A., Bucknell University, 1969; Ph.D., University of Michigan, 1974.

Portier, William L. (2003), Religious Studies, Professor \& Spearin Chair in Catholic Theology - B.A., Loyola University, Chicago, 1969; M.A., Washington Theological Coalition, 1972; Ph.D., University of St. Michael's College, Toronto, 1980.

Potter, Rebecca C. (2002), English, Associate Professor - B.A., University of California, Davis, 1991; M.A., Brandeis University, 1998; Ph.D., 2001.

Powers, Peter E. (1997), Physics, Professor - B.S., Massachusetts Institute of Technology, 1988; M.S., Cornell University, 1990; Ph.D., 1994.

Prasad, Jayesh (1990), Management Information Systems, Operations Management, and Decision Sciences, Professor - B.Tech., Indian Institute of Technology, Kharagpur, 1982; P.G.D.M., Indian Institute of Management, Calcutta, 1984; Ph.D., University of Pittsburgh, 1994.

Prevish, Darla M. (2013), Accounting, Lecturer - B.S., University of Dayton, 1991; M.B.A., Xavier University, 2001.

Qumsiyeh, Maher (2008), Mathematics, Assistant Professor - M.A., Indiana University, 1979; Ph.D., 1986.

Raffoul, Youssef N. (1999), Mathematics, Professor - B.S., University of Dayton, 1987; M.S., 1989; M.A., Indiana University, 1991; Ph.D., Southern Illinois University at Carbondale, 1996.

Razek, Nasser (2012), Counselor Education, Clinical Faculty - B.A., Zagazig University, 1991; Academic Master of Al Alsun, Ain Shams University, 1992; M.A., The University of Akron, 2007; Ed. D., University of Akron, 2012.

Reeb, Roger N. (1993), Psychology, Professor - B.A., Westminster College, 1984; M.S., Virginia Commonwealth University, 1987; Ph.D., 1993.

Reid, Patricia (2009), History, Assistant Professor - B.A., California State University, 1989; M.A., University of lowa, 1995; Ph.D., 2006.

Reilly, Tracy L. (2006), Law, Professor - B.A., Northern Illinois University, 1990; J.D., Valparaiso University School of Law, 1995.

Ren, Dan (2013), Mathematics, Assistant Professor - B.S., Beijing Normal University, 2004; M.A., 2006;M.S., New Mexico State University, 2008; Ph.D., Boston University, 2013.

Reynolds, Patrick A. (1996), Music, Associate Professor - B.M., University of Michigan, 1981; M.M., 1983; D.M.A., University of Cincinnati, 1997.

Rice, Frances E. (1999), Library, Associate Professor - B.A., University of Dayton, 1976; M.B.A., 1987; M.L.S., Kent State University, 1996.

Richards, Stephen B. (2000), Teacher Education, Associate Professor - B.A., University of North Carolina at Chapel Hill, 1976; M.A., East Carolina University, 1979; Ed.D., Florida Atlantic University, 1999.
Richards, William M. (1970), Philosophy, Professor - B.A., LeMoyne College, 1966; Ph.D., Georgetown University, 1970.

Ridenour, Carolyn R. (1990), Educational Leadership, Professor - B.A., Indiana University, 1964; M.A.T., 1967; Ed.D., University of Akron, 1980.

Ritterhoff, Kimberly A. (2011), Health and Sport Science, Lecturer - B.S., Ohio University, 2003; M.S., Wright State University, 2011.

Roberts, William P. (1980), Religious Studies, Professor - B.A., Fordham University, 1955; M.A., 1957; Ph.L., Loyola Seminary, 1956; S.T.L., Weston School of Theology, 1963; Ph.D., Marquette University, 1968.

Robinson, James D. (1982), Communication, Professor - B.A., University of the Pacific, 1978; M.A., West Virginia University, 1979; Ph.D., Purdue University, 1982.

Robinson, Jayne B. (1994), Biology, Professor - B.S., Bowling Green State University, 1978; M.S., Ohio State University, 1984; Ph.D., 1991.

Rodgers, Linda V. (1998), Counseling Center, Administrative - B.A., Mt. Mary College, 1989; M.S., University of Wisconsin-Milwaukee, 1991; Ph.D., 1998.

Rodriguez, Dario N. (2012), Psychology, Lecturer - B.A., University of Dayton, 2006; M.A., University of Dayton, 2008; Ph.D., John Jay College of Criminal Justice \& the Graduate Center, 2012.

Roecker Phelps, Carolyn E. (1995), Psychology, Associate Professor - B.S., University of Illinois, 1984; M.S., Illinois State University, 1990; Ph.D., University of lowa, 1994.

Rogero, Leroy H. (2008), Accounting, Lecturer - B.S., University of Dayton, 1968; M.S., 1971.

Roten, Rev. Johann G., S.M. (1987), International Marian Research Institute, Administrative - B.Ed., Ecole Normales des Instituteurs, Sion, 1963; B.A., College of St. Michel, Fribourg, 1962; S.T.L., University of Fribourg, 1969; Lic.Phil., 1972; S.T.D., Pontifical Theological Faculty Marianum in Rome, 1987.

Rowe, John J. (1977), Biology, Professor - B.S., Colorado State University, 1968; M.S., Arizona State University, 1971; Ph.D., University of Kansas Medical Center, 1975.

Roy, Haimanti (2013), History, Assistant Professor - B.A., Presidency College, 1996; M.A., Jawaharlal Nehru University, 1998; Ph.D., University of Cincinnati, 2006.

Ruggiero, John G. (1995), Economics and Finance, Professor, Edmund B. O'Leary Chair in Economics - B.A., State University of New York at Cortland, 1988; M.A., Syracuse University, 1992; Ph.D., 1995.

Rush, Tobias W. (2011), Music, Assistant Professor - B.A., Adams State College, 1996; M.M., University of Northern Colorado, 1998; D.A., University of Northern Colorado, 2007.

Russo, Charles J. (1996), Educational Leadership, Joseph Panzer Professor of Education - B.A., St. John's University, 1972; M.Div., Seminary of the Immaculate Conception, 1978; J.D., St. John's University School of Law, 1983; Ed.D., St. John's University Graduate School of Education and Human Services, 1989.

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Santamarina, Juan C. (1997), History, Associate Professor - B.A., University of Wisconsin-Madison, 1989; Ph.D., Rutgers University, 1995.

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Schaller, Molly A. (1989), Counselor Education and Human Services, Associate Professor - B.A., Ohio State University, 1987; M.S., Miami University, 1989; Ph.D., Ohio University, 2000.

Schellhammer, Ulrike B. (2001), Global Languages and Cultures, Lecturer - M.A., Rice University, 1989; Ph.D., 1993.

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Secrease-Dickson, Cassandra (2013), Communication, Lecturer - A.A., Bucks County Community College, 1994; B.A., West Chester University of Pennsylvania, 1997; M.A., Central Missouri State University, 2000; Ph.D., Indiana University, 2012.

Segalewitz, Scott I. (2000), Engineering Technology, Professor B.S.E.E., Rutgers University, 1983; M.S., New Jersey Institute of Technology, 1986; Reg. Prof. Engr.

Seielstad, Andrea M. (1996), Law, Professor - A.B., Princeton University, 1988; J.D., University of Michigan Law School, 1991.

Sexto, Laura Elizabeth (2012), History, Lecturer - B.A., University of California Santa Cruz, 1997; M.A., New York University, 2002; Ph.D., University of California, Irvine, 2012.

Sexton, Maureen (2005), English, Lecturer - B.A., University of Dayton, 1995; M.A., 2002.

Shaw, Lori E. (1988), Law, Professor of Lawyering Skills - B.S., University of Dayton, 1983; J.D., 1987.

Sheidler, Jeb O. (2013), Physician Assistant Education, Clinical Faculty - B.A., Miami University, 1987;A.A., Kettering College of Medical Arts, 1991; M.P.A.S., University of Nebraska, 2004

Sievers, David A. (2009), Music, Artist-in-Residence - B.M.A., Washington State University, 1994; M.M.A., Boise State University, 1996; D.M., Indiana University, 2009.

Simon, Julie (2010), Mathematics, Lecturer - B.A., Wellesley College, 1983; Ph.D., University of Illinois, 1989.

Singh, Amit (2007), Biology, Associate Professor - B.S., H.P. University, 1988; M.S., Devi Ahilya University, 1990; Ph.D., 1995.

Skill, Thomas D. (1984), Communication, Professor - B.A., State University of New York at Buffalo, 1978; M.A., 1980; Ph.D., 1984.

Slade, R. Andrew (2003), English, Associate Professor - B.A., Seattle University, 1995; B.A., Katholieke Universiteit Leuven, 1996; Ph.D., State University of New York at Stony Brook, 2004.

Slater, Jillian M. (2011), Library, Assistant Professor - B.A., California State University, 2004; M.L.S., San Jose State University, 2009.

Smith, Anthony B. (1999), Religious Studies, Associate Professor - B.A., Boston College, 1985; M.A., University of Minnesota, 1989; Ph.D., 1995.

Smith, Todd B. (2001), Physics, Associate Professor - B.S., University of Notre Dame, 1989; M.A., Miami University, 1990; M.S., University of Michigan, 1995; Ph.D., 1998.

Song, Yong (2008), Physics, Lecturer - B.S., University of Science and Technology of China, 1996; M.S., 1999; M.S., University of Cincinnati, 2001; Ph.D., 2008.

Sparks, John R. (1995), Management and Marketing, Associate Professor - B.B.A., West Texas State University, 1988; Ph.D., Texas Tech University, 1995.

Sritharan, R. (1999), Computer Science, Professor - B.Tech., Indian University of Technology, 1985; M.S., Vanderbilt University, 1988; Ph.D., 1995.

Steinlage, Lester J. (2000), Mathematics, Lecturer - B.S., University of Dayton, 1965; M.S., 1969.

Stoermer, Riley (2013), Library, Lecturer - B.A., Wittenberg University, 2008; M.L.I.S., Kent State University, 2011; M.S., 2012.

Strain, Margaret M. (1995), English, Professor - B.A., Bellarmine College, 1977; M.A., University of Louisville, 1986; Ph.D., 1995.

Street, Donna L. (2002), Accounting, Professor, AI \& Marcie Mahrt Chair in Accounting - B.B.A., East Tennessee State University, 1981; M.Acc., University of Tennessee, 1983; Ph.D., 1987.

Street, P. Eric (1992), Music, Professor - B.M., Cornell College, 1975; M.M., Indiana University, 1977; D.M., 1985.

Subramanyam, Guru (1998), Electrical and Computer Engineering, Professor - B.E., University of Madras; 1984; M.S., University of Cincinnati, 1988; Ph.D., 1993.

Sullivan, Diane M. (2006), Management and Marketing, Associate Professor - B.S.B.A., University of Central Florida, 1997; M.B.A.; (cand.) Ph.D., 2006.

Sutherland, Bobbi Sue (2012), History, Lecturer - B.A., Calvin College, 2003; M.A., Yale University, 2005; M. Phil, Yale University, 2007; Ph.D., Yale University, 2009.

Swavey, Shawn M. (2002), Chemistry, Associate Professor - B.S., Edinboro University, 1991; M.S., Case Western Reserve University, 1995; Ph.D., 1998.

Sweeney, Paul D. (2001), Management and Marketing, Professor - B.A., California State University, 1978; M.S., University of Pittsburgh, 1980; Ph.D., 1983.

Szeghi Dempster, Tereza (2009), English, Assistant Professor - B.A., University of Cincinnati, 2000; M.A., University of Arizona, 2004; Ph.D., 2007.

Taaffe, Maura J. (2011), English, Lecturer - B.A., Ohio Dominican College, 1971; M.A., The Ohio State University,; Ph.D., Michigan Technological University, 2010.

Taha, Tarek (2009), Electrical and Computer Engineering, Assistant Professor - B.A., DePauw University, 1996; B.S.E.E., Georgia Institute of Technology, 1996; M.S.E.E., 1998; Ph.D., 2002.

Talbert-Johnson, Carolyn (1991), Teacher Education, Professor - B.A., Ohio Dominican College, 1976; M.A., Ohio State University, 1978; Ph.D., 1991.

Talbott, Anthony N. (2008), Political Science, Lecturer - B.A., Columbia College, 1995; M.A., Ohio University, 1997

Tanova, Nadya (2009), Global Languages and Cultures, Lecturer - M.A., University of Sofia, 1990; M.A., Purdue University, 2003.

Taylor, Annette M. (1988), Communication, Assistant Professor - B.A., Michigan State University, 1974; M.A., 1988; Ph.D., Bowling Green State University, 1996.

Taylor, Denise G. (2006), Civil and Environmental Engineering and Engineering Mechanics, Associate Professor - B.S., Virginia Polytechnic Institute and State University, 1981; B.C.E., University of Dayton, 1992; M.S., University of Cincinnati, 1995; Ph.D., Johns Hopkins University, 2003.

Teems, Yvonne R. (2012), English, Lecturer - B.S., Ohio University, 2004; M.A., University of Dayton, 2009;

Tello Sánchez, Maria Teresa (2007), Global Languages and Cultures, Lecturer - B.A., University of Salamanca, 2003; M.A., 2007.

Thomas, Patrick W. (2011), English, Assistant Professor - B.A., Mercyhurst College, 2002; M.A., Kent State University, 2006; Ph.D., Kent State University, 2011.

Thompson, Daniel Patrick Speed (2012), Religious Studies, Associate Professor - B.A., University of Notre Dame, 1986; A.M., The University of Chicago, 1987; Ph.D., The University of Chicago, 1998.

Thompson, Teresa L. (1985), Communication, Professor - B.A., University of Wisconsin, 1975; M.A., Purdue University, 1976; Ph.D., Temple University, 1980.

Thompson, Rev. Thomas A., S.M. (1987), Library, Administrative - B.A., University of Dayton, 1958; M.A., University of Pittsburgh, 1963; S.T.L., University of Fribourg, 1968; Ph.D., University of Pittsburgh, 1977.

Thompson-Miller, Ruth K. (2011), Sociology, Anthropology and Social Work, Assistant Professor - B.S., University of Florida, 2002; M.S., Texas A\&M University, 2004; Ph.D., Texas A\&M University, 2011.

Tibbetts, Paul E., Jr. (1969), Philosophy, Professor - B.A., Clark University, 1964; M.A., Boston University, 1965; Ph.D., Purdue University, 1973; Ph.D., University of Illinois, 1985.

Titlebaum, Peter J. (1996), Health and Sport Science, Professor - B.S., State University of New York at Brockport, 1982; M.S., Ohio State University, 1985; Ph.D., Temple University, 1993.

Todd, Adam G. (2010), Law, Associate Professor of Lawyering Skills B.A., Brown University, 1983; J.D., Rutgers School of Law, 1990.

Toubia, Elias A. (2011), Civil and Environmental Engineering and Engineering Mechanics, Assistant Professor - B.S., Lebanese University, 2000; M.S., University of Dayton, 2003; Ph.D., University of Dayton, 2008.

Trick, Kimberly A. (1994), Chemistry, Lecturer - B.Ch.E., University of Dayton, 1984; M.S., 1988; Ph.D., 1994.

Trohalaki, Steven (2013), Chemistry, Visiting Assistant Professor - B.S., State University of New York, Albany, 1979; Ph.D., 1987.

Trollinger, Susan (2007), English, Associate Professor - B.A., University of Wisconsin, 1986; M.A., University of Pittsburgh, 1988; Ph.D., 1995.

Trollinger, William (1998), History, Professor - B.S., Bethel College, 1977; M.S., University of Wisconsin, 1980; Ph.D., 1984.

Tsen, Hsuan (2012), Visual Arts, Lecturer - B.A., Hampshire College, 1998; Ph.D., Stanford University, 2011.

Tsonis, Panagiotis A. (1989), Biology, Professor - B.S., Patras University, 1977; M.S., Nagoya University, 1980; Ph.D., 1983.

Turner, Daniel A. (2012), Chemistry, Visiting Assistant Professor - B.A., Capital University, 2006; Ph.D., The Ohio State University, 2012.

UhIman, Todd (2009), History, Lecturer - B.A., Indiana University, 1998; Ph.D., Rutgers University, 2008.

Untener, Joseph A. (1987), Engineering Technology, Professor - B.M.E., General Motors Institute, 1984; M.S., Purdue University, 1985; Reg. Prof. Engr.

Usman, Mohammad (2007), Mathematics, Associate Professor - M.S., Ohio University, 2001; M.A., 2001; Ph.D., University of Cincinnati, 2007.

Vanderburgh, Paul (2004), Health and Sport Science, Professor - B.S., United States Military Academy, 1982; M.A., University of Georgia, 1988; Ed.M., Columbia University, 1991; Ed.D., 1992.

Van Zandt, Victoria (2005), Law, Associate Professor of Lawyering Skills - B.A., Ohio State University, 1991; J.D., University of Dayton, 1996.

Valenzano, Joseph M. III (2011), Communication - B.A., Providence College, 2000; M.A., University of Maine, 2002; Ph.D., Georgia State University, 2006.

Velasquez, Ernesto (2009), Philosophy, Assistant Professor - B.A., University of Illinois at Chicago, 1998; M.A., University of Hawaii at Manoa, 2000; Ph.D., State University of New York at Buffalo, 2009.

Venard, Paul (2007), Law Library, Associate Professor - B.S., John Carroll University, 1997; J.D., Kent State University, 2001; M.L.I.S., 2005.

Ventura, Renato (2010), Global Languages and Cultures, Assistant Professor - B.A., Trinity College, 2003; M.A., University of Connecticut, 2006; Ph.D., University of Connecticut, 2011.

Voracheck, Laura (2007), English, Associate Professor - B.A., Trinity University, 1991; M.A., University of Texas-Houston, 1995; Ph.D., University of Wisconsin, 2004.

Vorontsov, Mikhail (2009), Electro-Optics, Professor and WBI Endowed Chair in Ladar and Free Space Optical Communications - M.S., Moscow State University, 1974; Ph.D., 1977; D.Sc., Lomonosov Moscow State University, 1989.

Wagner, Peter G. (1999), Management Information Systems, Operations Management, and Decision Sciences, Lecturer - B.S., Louisiana Tech University, 1970; M.S., University of Southern California, 1980.

Wallace, Samuel P. (1982), Communication, Associate Professor - B.A., Ohio State University, 1975; M.A., 1979; Ph.D., 1985

Walter, Beth A. (2013), Communication, Lecturer - B.A., Carlow University, 1996; M.A., Duquesne University, 2004; Ph.D., expected 2014.

Walters, Glenn R. (1997), Communication, Media Executive-in-Residence - B.A., Denison University, 1952; M.A., University of Dayton, 1986.

Wang, Fukuo Albert (2005), Economics and Finance, Associate Professor - B.A., National Taiwan University, 1982; M.B.A., University of North Carolina, 1989; Ph.D., 1994.

Washington, Versalle (2010), History, Lecturer - B.S., United States Military Academy, 1985; M.A., The Ohio State University, 1994; Ph.D., 1995.

Watkins, David (2010), Political Science, Assistant Professor - B.A., Western Washington University, 1997; M.A., University of Washington, 2000; Ph.D., 2008.

Watras, Joseph L. (1979), Teacher Education, Professor - B.A., Boston University, 1965; M.Ed., University of Hawaii, 1969; Ph.D., Ohio State University, 1972.

Watson, Blake A. (1992), Law, Professor - B.A., Vanderbilt University, 1978; J.D., Duke University, 1981.

Watters, Kathleen B. (1989), Communication, Associate Professor - B.S., University of Minnesota, 1976; M.A., 1979; Ph.D., 1988.

Wawrose, Susan C. (1998), Law, Professor of Lawyering Skills.
Webb, Kathleen M. (1993), Library, Professor - B.S., Pennsylvania State University, 1982; M.L.S., University of California, Los Angeles, 1991.

Webber, Sarah J. (2010), Accounting, Assistant Professor - B.S. University of Dayton, 2003; M.B.A., 2003; J.D., Ohio State University, 2007; L.L.M., Capital University, 2010.

Welkener, Michele (2008), Counselor Education and Human Services, Assistant Professor - B.F.A., Miami University, 1990; M.A., 1992; Ph.D., 2000.

Wells, Andrea Chenoweth (2012), Music, Artist in Residence - B.A., University of Dayton, 2000; M.Mus., Cleveland Institute of Music, 2004.

Wells, Charles E. (1984), Management Information Systems, Operations Management, and Decision Sciences, Professor - A.B., Harvard University, 1976; M.B.A., Miami University, 1977; Ph.D., University of Cincinnati, 1982.

Wells, Rebecca M. J. Yates (1980), Management and Marketing, Associate Professor - B.B.A., University of Cincinnati, 1973; M.B.A., 1975; Ph.D., 1980.

Westendorf, Thomas J. (1982), Office of the Registrar, Administrative B.S., University of Dayton, 1978; M.B.A., 1986.

Whisnant, Rebecca S. (2003), Philosophy, Associate Professor - B.A., Oberlin College, 1989; M.A., University of North Carolina, 1993; Ph.D., 2002.

Whitaker, Jayne K. Matlack (1993), Visual Arts, Associate Professor B.S., University of Delaware, 1983; M.F.A., Tyler School of Art of Temple University, 1993.

Whitaker, Joel A. (1993), Visual Arts, Professor - B.F.A., University of Montevallo, 1985; M.F.A., Florida State University, 1988.

White, John J. (2007), Teacher Education, Associate Professor - B.A., University of Massachusetts at Boston, 1984; M.A., Boston College, 1995: Ph.D., 2000.

Whitney, Thomas J. (1988), Civil and Environmental Engineering and Engineering Mechanics, Associate Professor - B.M.E., University of Dayton, 1986; M.M.E., University of Delaware, 1988; Ph.D., University of Dayton, 2003.

Wilbers, Timothy A. (1983), Visual Arts, Associate Professor - B.A.Ed., Ohio State University, 1972; M.A., 1974; M.F.A., Southern Illinois University, 1981.

Wilhoit, Stephen W. (1988), English, Associate Professor - B.A., University of Kentucky, 1980; M.A., University of Louisville, 1983; Ph.D., Indiana University, 1988.

Wilkens, Robert J. (1999), Chemical and Materials Engineering, Professor - B.C.M.E., University of Dayton, 1992; M.S. 1993; Ph.D., Ohio University, 1997.

Williams, Martha L. (2006), Global Languages and Cultures, Lecturer B.A., State University of New York, 1965; M.S., Wright State University, 1985; M.A., Georgia State University, 1975.

Williams, P. Kelly (1973), Biology, Professor - B.A., University of Texas, 1966; M.S., University of Minnesota, 1969; Ph.D., Indiana University, 1973.

Williams, Thomas M. (2009), Biology, Assistant Professor - B.S., Eastern Michigan University, 1999; M.S., University of Michigan, 2003; Ph.D., 2004.

Winning, Thomas E. (1999), School of Business Administration, Executive-in-Residence - B.S., Ohio State University, 1971; M.B.A., University of Dayton, 1976.

Woeste, Julie L.(2013), School of Business Administration, Lecturer B.S., Nyack College, 2008; M.B.A., University of Dayton, 2010.

Wolff, Robert L. (1958), Engineering Technology, Professor - B.S., University of Dayton, 1959; M.B.A., Xavier University, 1967.

Work, Nicola (2009), Global Languages and Cultures, Assistant Professor - B.A., Wayne State University, 1998; M.A., 2000.

Wright, David J. (1996), Biology, Associate Professor - B.S., University of Sheffield, England; Ph.D., University of Iowa, 1989.

Wright, Shirley J. (1993), Biology, Associate Professor - B.S., Loyola University, Chicago, 1981; M.S., 1983; Ph.D., University of lowa, 1981.

Wu, Shuang-Ye (2004), Geology, Associate Professor - B.A., Nanjing University, 1991; M.A., Beijing Foreign Study University, 1994; M.Phil., Cambridge University, 1996; Ph.D., 2000.

Wulff, Susan M. (2012), Physician Assistant Education, Clinical Faculty - Associate Degree, Kettering College of Medical Arts, 1969; B.S., Kettering College of Medical Arts, 1999; M.S., Arizona School of Heath Sciences, 2002.

Wynn, Donald (2007), Management Information Systems, Operations Management, and Decision Sciences, Associate Professor - B.A., University of Tennessee, 1988; M.B.A., Middle Tennessee State University, 1998.

Yao, Zhongmei (2009), Computer Science, Assistant Professor - B.E., Donghua Unviersity, 1997; M.S., Louisiana Tech University, 2004.

Yengulalp, Lynne (2009), Mathematics, Assistant Professor - B.S., Miami University, 2001; M.S., 2003.

Yocum, Sandra (1992), Religious Studies, Associate Professor - B.A., University of Oklahoma, 1976; Ph.D., Marquette University, 1987.

Yoder, Donald D. (1989), Communication, Associate Professor - B.S., Iowa State University, 1973; M.A., University of Nebraska-Lincoln, 1975; Ph.D., Ohio State University, 1982.

Young, Pamela R. (2011), Educational Leadership, Assistant Professor - B.S., Bowling Green State University, 1974; M.S., Mansfield State College, 1977; Ph.D., University of Dayton, 2002.

Zalewski, Daniel J. (2013), Engineering Management and Systems, Assistant Professor - B.S., United States Air Force Academy, 1983; M.S., George Mason University, 1988; Ph.D., Air Force Institute of Technology, 1995.

Zamierowski, Edward E., S.M. (1974), Fitz Center for Leadership in Community, Administrative - B.S.E., University of Dayton, 1955; M.S., Ohio State University, 1960; Ph.D., University of Nairobi, 1973.

Zargham, Mehdi (2013), Computer Science, Professor - B.Sc., Computer College/School of Planning and Computer Application, 1977; M.Sc., Michigan State University, 1980; Ph.D.,1983.

Zhan, Qiwen (2002), Electro-Optics, Professor - B.S., University of Science and Technology of China, 1996; M.S.E.E., University of Minnesota, 2000; Ph.D., 2002.

Zhang, Ting (2009), Economics and Finance, Assistant Professor - B.A., Shanghai International Studies University, 1994; M.B.A., University of Northern Iowa, 2002; M.Acc., 2003; M.S.F., Clark University, 2005.

Zink, Julie (2006), Law, Professor of Lawyering Skills - B.A., Wright State University, 1996; J.D., University of Dayton, 1999.

Zois, Catherine J. (1998), Psychology, Associate Professor - B.S., University of Illinois, 1992; M.A., Wayne State University, 1995; Ph.D., 1997.

Zukowski, Angela Ann, M.H.S.H. (1979), Religious Studies, Professor B.A., University of Dayton, 1974; M.A., 1978; D.Min., United Theological Seminary, 1988.

# Undergraduate Common Academic Program 

The Common Academic Program (CAP) is the portion of the curriculum shared by all undergraduate students, starting with the entering class in 2013. It embodies seven UD learning goals: scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation. The courses challenge students and faculty to link aspects of their own lives, majors, and careers to a broader world. Students' unique learning experiences promote knowledge, skills and dispositions through engaging, developmental, and integrated courses and experiences that are necessary for 21 st Century graduates.

## Learning Outcomes

1. Scholarship: All undergraduates will develop and demonstrate advanced habits of academic inquiry and creativity through the production of a body of artistic, scholarly or community based work intended for public presentation and defense.
2. Faith traditions: All undergraduates will develop and demonstrate ability to engage in intellectually informed, appreciative, and critical inquiry regarding major faith traditions. Students will be familiar with the basic theological understandings and central texts that shape Catholic beliefs and teachings, practices, and spiritualities. Students' abilities should be developed sufficiently to allow them to examine deeply their own faith commitments and also to participate intelligently and respectfully in dialogue with other traditions.
3. Diversity: All undergraduates will develop and demonstrate intellectually informed, appreciative, and critical understanding of the cultures, histories, times, and places of multiple others, as marked by class, race, gender, ethnicity, religion, nationality, sexual orientation, and other manifestations of difference. Students' understanding will reflect scholarly inquiry, experiential immersion, and disciplined reflection.
4. Community: All undergraduates will develop and demonstrate understanding of and practice in the values and skills necessary for learning, living, and working in communities of support and challenge. These values and skills include accepting difference, resolving conflicts peacefully, and promoting reconciliation; they encompass productive, discerning, creative, and respectful collaboration with persons from diverse backgrounds and perspectives for the common purpose of learning, service, and leadership that aim at just social transformation. Students will demonstrate these values and skills on campus and in the Dayton region as part of their preparation for global citizenship.
5. Practical wisdom: All undergraduates will develop and demonstrate practical wisdom in addressing real human problems and deep human needs, drawing upon advanced knowledge, values, and skills in their chosen profession or major course of study. Starting with a conception of human flourishing, students will be able to define and diagnose symptoms, relationships, and problems clearly and intelligently, construct and evaluate possible solutions, thoughtfully select and implement solutions, and critically reflect on the process in light of actual consequences.
6. Critical evaluation of our times: Through multidisciplinary study, all undergraduates will develop and demonstrate habits of inquiry and reflection, informed by familiarity with Catholic Social Teaching, that equip them to evaluate critically and imaginatively the ethical, historical, social, political, technological, economic, and ecological challenges of their times in light of the past.
7. Vocation: Using appropriate scholarly and communal resources, all undergraduates will develop and demonstrate ability to articulate reflectively the purposes of their life and proposed work through the language of vocation. In collaboration with the university community, students' developing vocational plans will exhibit appreciation of the fullness of human life, including its intellectual, ethical, spiritual, aesthetic, social, emotional, and bodily dimensions, and will examine both the interdependence of self and community and the responsibility to live in service of others.

## Requirements

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0$ 0-3

ENG 200 Writing Seminar II
Oral Communication 3
CMM $100 \quad$ Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3

[^1]
## CAP Components

## First-Year Humanities

The first-year Humanities component will introduce the seven student learning outcomes and develop appropriate disciplinary objectives as part of the first-year courses in Religious Studies, Philosophy, History and English that create a foundation for student learning in the rest of the Common Academic Program and their majors. These courses will exhibit, at an introductory level, the value of humanistic inquiry and reflection as a means of advancing the seven learning outcomes. Particular emphasis will be placed on the diversity outcome. Collectively, these courses will introduce students to the concept that learning is a process of integrating knowledge within and across disciplines. To help students understand the relationship between disciplines and to begin to understand the importance of integrating knowledge across disciplines, the faculties of the departments offering these courses will develop other common elements, questions or themes to be considered in these courses. These courses challenge students to ask the question: "What does it mean to be human?" These courses will, when considered collectively, familiarize students with central concepts and texts of the Catholic intellectual tradition.

The CAP program will contain two writing courses, a first-year writing seminar and a second-year writing seminar. As part of the First-Year Humanities component of the CAP, students will enroll in either a firstyear writing seminar or a first-year honors writing seminar. Many students will begin by taking the first-year writing seminar. This course focuses on personal and academic literacies, with an emphasis on expository writing and the development of college-level reading, writing, research, and critical thinking skills as well as a process approach to writing. With its focus on personal and academic literacies, the first-year writing seminar addresses directly the question, "What does it mean to be human?" as it explores the relationship between reading/writing (or literacy) and being human. Based on placement criteria, some students will qualify to enroll in the first-year honors writing seminar. This course will also engage the question of what it means to be human in a manner fitting the context of a themed writing seminar (see description of second-year writing seminar below). Together, then, the first-year writing seminar and the first-year honors writing seminar will provide all incoming first-year students with a course in writing that supports multiple HIR outcomes and explores the question, "What does it mean to be human?" Students who complete the first-year honors writing seminar will not take the second-year writing seminar.

- Religious Studies
- Philosophy
- History
- Writing


## Second-Year Writing

The second-year writing seminar, taken by students who completed the first-year writing seminar, is a variable theme composition course focused on academic discourse, research, and argumentation. Students will further develop their reading, writing, research, and critical thinking abilities as they come into contact with the ways that various disciplines (at least three) engage a particular theme. In addition, by studying scholarship across disciplines students will develop rhetorical awareness about the arguments, approaches, and conventions of these disciplines. A focus throughout the course will be on enabling students to take a
process approach to making effective arguments in a complex academic context.

## Oral communication

To enhance students' ability to communicate effectively, all students will complete three hours in oral communication, normally in their first or second year of study. The Oral Communication foundational course will focus on the concepts of dialogue and debate, with the goals of engaging in constructive mutual dialogue in conversations and meetings; developing the ability to articulate, analyze, and defend a position in a public forum; understanding the differences between dialogue and debate; and understanding relative advantages and disadvantages of each mode of communication. With its focus on dialogue and debate, the course will assist students in the development of the skills necessary for learning, living, and working in communities. By developing the ability to engage in conversation that advances understanding, students will be better able to interact and collaborate with persons from diverse backgrounds and perspectives.

## Mathematics

To enhance quantitative reasoning skills, all students will complete three hours in mathematics. The particular course will vary based on the students' major and background in mathematics. The mathematics courses are most closely related to the HIR outcomes related to scholarship, practical wisdom and critical evaluation of our times.

## Social Sciences

Essential to life in the $21^{\text {st }}$ century is an understanding of the relationship between individuals, groups and institutions. All students will complete three hours in the social sciences. The social science course will be a theme-based course that varies across sections but shares common learning outcomes. The course will use social science methods and social theory to critically examine a human issue or problem from at least three social science disciplinary perspectives (anthropology, economics, political science, psychology and sociology). The course will emphasize outcomes related to scholarship, critical evaluation of our times, and the diversity of the human world.

## Arts

To ensure that all students acquire a basic understanding of the arts as significant manifestations of diverse cultural, intellectual, aesthetic, and personal experiences, all students will complete a three hour component in the Arts. The Arts component may include courses from the Departments of Music, Visual Arts, English and the Theatre Program. Courses will assist students to develop skills and acquire experiences that enable them to understand, reflect upon, and value the creative process within the context of the arts. The requirement may be satisfied by taking studio and performance courses as well as historical studies courses. Students may satisfy the three hour requirement with one three hour course or a combination of one- and two-hour courses. Given the diversity of the Arts, the specific learning outcomes addressed will vary across courses.

## Natural Science

An understanding of many significant issues confronting our world today requires a basic understanding of science. Students must take two threehour lecture courses in the physical or life sciences or computer science, at least one of which should be accompanied by a corresponding onehour laboratory section. Lecture sections are either a pre-requisite or co-
requisite to their correlative laboratory sections. Students are exposed to at least two of the five disciplines: biology, chemistry, computer science, geology, and physics. The science component actively challenges students to explore the scientific dimensions of complex, controversial or unresolved problems facing human society. It furthers the development of the outcomes related to scholarship, practical wisdom and critical evaluation of our times by challenging students to achieve an enriched understanding of the scientific method by applying it to issues of broad public interest. The community outcome is enhanced through the teambased learning that occurs in the laboratory setting.

## Crossing Boundaries

The Crossing Boundaries component includes four courses (Faith Traditions, Practical Ethical Action, Inquiry and Integrative courses) that challenge students and faculty to link aspects of their own lives, majors, and careers to a broader world within and outside academia. As a Catholic, Marianist, comprehensive university, the University of Dayton is particularly well-suited to develop curricular programs that forge these links and to offer extracurricular experiences to help students reflect on and understand these links. These courses focus on faith traditions, practical ethical action, Inquiry and Integration. Collectively, these courses will strengthen the Catholic intellectual tradition in significant ways. This tradition in Catholic and Marianist higher education emphasizes the centrality of theology and philosophy, the importance of linking faith and reason, the integration of knowledge, and the application of that knowledge to personal and social situations in the world today. Collectively, these courses will build on our strengths as a comprehensive Marianist university by engaging students and faculty across disciplinary lines and across academic units in order to see the relationship between the practical and the theoretical and to understand issues in a more integrative and holistic perspective. The student learning outcomes related to faith traditions, diversity, practical wisdom, critical evaluation of our times, and vocation are particularly important for this set of courses.

The course on faith traditions is designed to encourage students to better understand, reflect on, and place their own religious beliefs and experiences in a broader historical or cultural context. Courses satisfying the faith traditions component may be offered by any department provided that the courses incorporate some of the ideas from the introductory religious studies course and that they develop students' ability to examine their own faith commitments and to participate in dialogue with other faith traditions. The courses will: 1) place religious traditions within their historical context; 2) examine their philosophical foundations or the internal logic of religious thought, language, and practice; 3) compare religious traditions by examining their philosophical foundations, historical origins, artistic expressions, canonical texts, and/or storied practices; or 4) examine a religious tradition with which students are unfamiliar (e.g., a non-Christian tradition).

- Faith Traditions
- Practical Ethical Action
- Inquiry
- Integrative


## Capstone

The ability of students to integrate the knowledge acquired in the undergraduate career, both within the major and in the Common Academic Program, is greatly enhanced by a capstone experience. All students will have a capstone course or experience in their major. The capstone will provide students the opportunity to engage, integrate, practice, and demonstrate the knowledge and skills they have developed
in their major courses and which reflect learning outcomes associated with the Habits of Inquiry and Reflection. The capstone will provide students the opportunity to engage in the scholarship, activity and/or practice of their major field and further the students' understanding of their chosen vocation, career or profession. Students will present their work in a forum appropriate to their major. This course or experience will be designed by faculty in each major. It may, or may not be assigned credit hours.

## Advanced religious studies

As a Catholic and Marianist institution of higher education, the University regards religious studies and philosophy as having special roles in the undergraduate curriculum and in the attainment of University-wide learning outcomes. Students are expected to deepen their knowledge of the religious and philosophical traditions that inform the Catholic and Marianist education. Advanced study in these areas, especially when conducted through interdisciplinary courses, also assists students in constructing integrated knowledge of the central human questions examined in a liberal education. The fields of philosophy and religious studies, together with historical study are indispensable for students' education in the Catholic intellectual tradition. Students will take courses beyond the 100 level in these fields to further their understanding of the resources that the Catholic intellectual tradition offers for their own personal, professional and civic lives and also for the just transformation of the social world. By requiring every student to take six hours of courses in the areas of religious studies or philosophy and three hours in history beyond the 100 level, the University expects students to engage in liberal learning that connects theory and practice and to draw upon the resources of the Catholic intellectual tradition as they consider how to lead wise and ethical lives of leadership and service.

Students will have flexibility in fulfilling these requirements. First, these courses will frequently focus on issues related to, and satisfy the criteria for the Faith Traditions, Practical Ethical Action, Inquiry and Integrative components of the CAP. Second, the criteria for these requirements are disciplinary-based in the fields of religious, philosophical and historical studies and therefore not limited to specific departments. Courses offered outside the Departments of Philosophy, Religious Studies and History may count towards the advanced religious studies, philosophy and history requirements if the courses draw extensively from those disciplinary perspectives and address in significant ways aspects of the Catholic intellectual tradition. Courses satisfying the religious studies component might examine the central beliefs, texts or practices of one or more religious traditions or movements; examine ethics as a central feature of a religious tradition including the use of Catholic social teaching as a resource, or; examine cultural expressions of religious identity or tradition as the central focus of theological or religious studies. Courses satisfying the advanced philosophical studies component might evaluate competing solutions to theoretical or ethical options in the present day, or draw on the philosophical resources of the Catholic intellectual tradition to address the challenges of their times. Courses satisfying the advanced historical studies component might engage students in the study and analysis of primary materials to further develop students' historical sensibilities in a way that illuminates the historical dimensions of HIR learning outcomes. The course could examine a historical topic drawing on the work of historians to show how interpretations of the past may change over time.

## Advanced philosophy

As a Catholic and Marianist institution of higher education, the University regards religious studies and philosophy as having special roles in
the undergraduate curriculum and in the attainment of University-wide learning outcomes. Students are expected to deepen their knowledge of the religious and philosophical traditions that inform the Catholic and Marianist education. Advanced study in these areas, especially when conducted through interdisciplinary courses, also assists students in constructing integrated knowledge of the central human questions examined in a liberal education. The fields of philosophy and religious studies, together with historical study are indispensable for students' education in the Catholic intellectual tradition. Students will take courses beyond the 100 level in these fields to further their understanding of the resources that the Catholic intellectual tradition offers for their own personal, professional and civic lives and also for the just transformation of the social world. By requiring every student to take six hours of courses in the areas of religious studies or philosophy and three hours in history beyond the 100 level, the University expects students to engage in liberal learning that connects theory and practice and to draw upon the resources of the Catholic intellectual tradition as they consider how to lead wise and ethical lives of leadership and service.

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## Advanced history

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## Diversity and Social Justice

As a Marianist university, the University has a special concern for the poor and marginalized and a responsibility to promote the dignity, rights and responsibilities of all persons and peoples. The University curriculum is responsible for contributing to this effort and does so throughout the Common Academic Program, but in a more focused way through a Diversity and Social Justice component. Every student will investigate human diversity issues within a sustained academic context by taking at least three credit hours of course work that have a central focus on one or more dimensions of diversity that are relevant to social justice. The course must have a central focus on one or more dimensions of human diversity on the basis of which systems, institutions, or practices that obstruct social justice have functioned. The dimensions may include, but are not limited to, race, gender, socioeconomic class, and sexual orientation. Courses may address diversity within the United States, in a global context, or both. Since the course uses a social justice framework, it will consider constructive responses to such injustice.

Courses approved to satisfy the Diversity and Social Justice component will build on earlier CAP courses addressing diversity including the FirstYear Humanities courses, the Second-Year Writing Seminar, and the Social Science, Arts, Natural Science, and Oral Communication courses. The Diversity and Social Justice component may not double count with these courses, but may double count with courses taken to satisfy other CAP components or courses taken in the student's major.

## Approved Courses

Use links below or scroll down to view all CAP approved courses:

- First-Year Humanities (p. 104)
- Second-Year Writing Seminar (p. 104)
- Oral Communication (p. 104)
- Mathematics (p. 104)
- Social Science (p. 104)
- Arts (p. 104)
- Natural Sciences (p. 105)
- Crossing Boundaries - Faith Traditions (p. 105)
- Crossing Boundaries - Practical Ethical Action (p. 105)
- Crossing Boundaries - Inquiry (p. 106)
- Crossing Boundaries - Integrative (p. 106)
- Advanced Religious Studies (p. 107)
- Advanced Philosophical Studies (p. 107)
- Advanced Historical Studies (p. 108)
- Diversity and Social Justice (p. 108)
- Major Capstone Course or Experience (p. 109)


## First-Year Humanities

| ASI 110 | Development of Western Culture in a Global <br> Context | 7 |
| :--- | :--- | :--- |
| ASI 120 | Development of Western Culture in a Global <br> Context | 8 |
| ENG 100 | Writing Seminar I | 3 |
| ENG 100A | Writing Seminar 1A | 2 |
| ENG 100B | Writing Seminar 1B | 2 |
| ENG 200H | Writing Seminar II | 3 |
| HST 103 | The West \& the World | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| REL 103 | Introduction to Religioius \& Theological Studies | 3 |

Second-Year Writing Seminar
ENG $200 \quad$ Writing Seminar II

## Oral Communication

CMM $100 \quad$ Principles of Oral Communication 3

## Mathematics

| MTH 114 | Contemporary Math | 3 |
| :--- | :--- | :--- |
| MTH 129 | Calculus for Business | 3 |
| MTH 137 | Calculus I with Review | 4 |
| MTH 148 | Introductory Calculus I | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 205 | Mathematical Concepts II | 3 |
| MTH 207 | Introduction to Statistics | 3 |

## Social Sciences

CMS 316 Intercultural Communication 3

| ECO 203 | Principles of Microeconomics | 3 |
| :--- | :--- | :--- |
| ECO 204 | Principles of Macroeconomics | 3 |
| POL 101 | Global Politics | 3 |
| POL 331 | Nationalism \& Ethnopolitics | 3 |
| PSY 101 | Introductory Psychology | 3 |
| PSY 341 | Social Psychology | 3 |
| PSY 375 | Psychology of the Arts | 3 |
| PSY 443 | Psychology of Women | 3 |
| SOC 322 | Sex Roles \& Society | 3 |
| SOC 332 | Sociology of Women | 3 |
| SOC 341 | Self \& Society | 3 |
| SOC 352 | Community | 3 |
| SSC 200 | Integrated Social Science CAP Pilot | 3 |

## Arts

| ENG 203 | Major British Writers | 3 |
| :--- | :--- | :--- |
| ENG 204 | Major American Writers | 3 |
| ENG 205 | Major World Writers | 3 |
| ENG 270 | Reading \& Writing in the American University | 4 |
| ENG 271 | Technical Writing Laboratory | 2 |
| ENG 272 | Writing \& Research | 3 |
| ENG 301 | Survey of Early English Literature | 3 |
| ENG 302 | Survey of Later English | 3 |
| ENG 305 | Survey of American Literature | 3 |
| ENG 322 | Masterpieces of World Literature | 3 |
| ENG 333 | Images of Women in Literature | 3 |

ENG 334 Modern Men -- Images ..... 3
ENG 335 African American Literature ..... 3
ENG 336 Gender in Fiction ..... 3
ENG 338 Images of Business ..... 3
ENG 339 American Indian Literature ..... 3
ENG 340 The Prison in Literature 3
3ENG 345Colonial \& Postcolonial Literature3
ENG 346 Literature \& Human Rights ..... 3
ENG 353 Literature of the Renaissance ..... 3
ENG 360 US Latina/Latino Literature ..... 3
ENG 362 Shakespeare ..... 3
MUS 201 Music In Concert ..... 3
MUS 203 Sights \& Sounds of Music ..... 3
MUS 223
Music, Instruments \& Techonology ..... 3
MUS 232 Integrating the Arts ..... 2
MUS 303 Introduction to Music of the World ..... 3
MUS 304 History of American Music ..... 3
MUS 306 History of American Jazz ..... 3
3
MUS 327 Music in FilmMUS 352Understanding Sacred Music \& Worship in theLocal Church

| REL 352 | Understanding Sacred Music in Worship in the <br> Local Church | 3 |
| :--- | :--- | :--- |
| THR 105 | Introduction to Theatre | 3 |
| VAF 104 | Foundation Drawing | 3 |
| VAF 203 | Drawing thru Process | 3 |
| VAF 225 | Painting for Non-Majors | 3 |
| VAF 242 | Ceramics II | 3 |
| VAH 101 | Introduction to the Visual Arts | 3 |
| VAH 201 | Survey of Art I | 3 |
| VAH 202 | Survey of Art II | 3 |
| VAH 203 | Survey of Art III | 3 |
| VAP 100 | Darkroom Photography | 3 |
| VAP 101 | Foundation Photography | 3 |
| VAP 200 | Digital Photography for Non-Majors | 3 |
| VAR 210 | Visual Journal | 3 |

## Natural Sciences

| BIO 101 | General Biology I | 3 |
| :---: | :---: | :---: |
| BIO 151 | Concepts of Biology I: Cell \& Molecular Biology | 3 |
| BIO 152 | Concepts of Biology II: Evolution \& Ecology | 3 |
| BIO 395 | Global Environmental Biology | 3 |
| CHM 123 | General Chemistry | 3 |
| CHM 200 | Chemistry \& Society | 3 |
| CHM 304 | Physical Chemistry | 3 |
| CPS 150 | Algorithms \& Programming I | 4 |
| EGR 320 | Systems Design Scholars Seminar | 3 |
| GEO 103 | Principles of Physical Geography | 3 |
| GEO 109 | General Geology | 3 |
| GEO 115 | Physical Geology | 3 |
| GEO 116 | Geological History of the Earth | 3 |
| GEO 204 | Geology for Teachers | 4 |
| GEO 208 | Environmental Geology | 3 |
| GEO 218 | Engineering Geology | 3 |
| HSS 305 | Human Anatomy | 3 |
| PHY 105 | Physical Science - Energy \& the Environment | 3 |
| PHY 108 | Physical Science of Light \& Color | 3 |
| PHY 201 | General Physics | 3 |
| PHY 206 | General Physics I-Mechanics | 3 |
| PHY 250 | Descriptive Astronomy | 3-4 |
| SCI 180 | Foundations of Integrated Natural Science I- The Dynamic Universe | 4 |
| SCI 190 | The Physical Universe | 3 |
| SCI 200 | FinsII: Dynamic Universe | 4 |
| SCI 210 | The Dynamic Earth | 3 |
| SCI 220 | The World of Chemistry | 3 |
| SCI 230 | Organisms, Evolution \& Environment | 3 |
| SCI 240 | Organisms, Evolution \& Health | 3 |
| SCI 300 | Computing in a Global Society | 3 |
| SCI 310 | Earth \& Sky | 3 |
| SEE 301 | Global Change \& Earth Systems | 3 |


| HST 305 | Medieval Europe | 3 |
| :---: | :---: | :---: |
| HST 307 | Renaissance \& Reformation | 3 |
| HST 372 | History of Religion in the United States | 3 |
| MUS 352 | Understanding Sacred Music \& Worship in the Local Church | 3 |
| REL 304 | Hinduism | 3 |
| REL 306 | Buddhism | 3 |
| REL 308 | Islam | 3 |
| REL 315 | The Gospels | 3 |
| REL 318 | Studies in Paul | 3 |
| REL 323 | History of Christianity I | 3 |
| REL 328 | United States Catholic Experience | 3 |
| REL 352 | Understanding Sacred Music in Worship in the Local Church | 3 |
| REL 356 | The Christian Tradition of Prayer | 3 |
| REL 366 | The Holocaust: Theological \& Religious Responses | 3 |
| REL 377 | The Inner Journey in Myth, Bible \& Literature | 3 |
| REL 471 | Women \& Religion | 3 |
| Crossing Boundaries - Practical Ethical Action |  |  |
| ASI 371 | Professional Ethics in a Global Community Business Administration | 3 |
| ASI 372 | Professional Ethics in a Global Community Education | 3 |
| ASI 373 | Professional Ethics in a Global Community Engineering | 3 |
| ASI 374 | Professional Ethics in a Global Community Philosophical | 3 |
| ASI 375 | Professional Ethics in a Global Community Religious | 3 |
| CJS 303 | Corrections | 3 |
| EDT 305 | Philosophy \& History of American Education | 3 |
| PHL 310 | Social Philosophy | 3 |
| PHL 312 | Ethics | 3 |
| PHL 313 | Business Ethnics | 3 |
| PHL 315 | Medical Ethics | 3 |
| PHL 316 | Engineering Ethics | 3 |
| PHL 317 | Ethics \& Modern War | 3 |
| PHL 318 | Family Ethics | 3 |
| PHL 319 | Information Ethics | 3 |
| PHL 321 | Environmental Ethics | 3 |
| PHL 327 | Philosophy of Peace | 3 |
| PHL 330 | Philosophy of Science | 3 |
| PHL 334 | Philosophy \& Ecology | 3 |
| PHL 371 | Philosophy \& Human Rights | 3 |
| PHL 375 | Ethical Theory | 3 |
| PHL 376 | Philosophy \& Revolution | 3 |
| PHL 377 | Philosophy \& Mass Media | 3 |
| POL 306 | Public Policy Analysis | 3 |
| POL 371 | Environmental Policy | 3 |
| REL 344 | Christian Marriage | 3 |


| REL 358 | Liberation Theology | 3 |
| :---: | :---: | :---: |
| REL 360 | Christian Ethics | 3 |
| REL 363 | Faith \& Justice | 3 |
| REL 365 | Christian Ethics \& the Environment | 3 |
| REL 367 | Christian Ethics \& Health Care Issues | 3 |
| REL 368 | Christian Ethics \& the Business World | 3 |
| REL 369 | Christian Ethics \& Engineering | 3 |
| SEE 402 | Sustainability Research II | 3 |
| SOC 323 | Juvenile Justice | 3 |
| SOC 327 | Criminology | 3 |
| SOC 331 | Marriage \& the Family | 3 |
| SOC 336 | Organizations in Modern Society | 3 |
| SOC 410 | Victimology | 3 |
| SWK 331 | Death, Dying \& Suicide | 3 |
| Crossing Boundaries - Inquiry |  |  |
| ACC 200 | Introduction to Accounting | 3 |
| AMS 300 | American Cultures | 3 |
| ANT 306 | Culture \& Power | 3 |
| ANT 315 | Language \& Culture | 3 |
| ANT 336 | Epidemics, Power \& the Human Condition | 3 |
| CEE 390 | Environmental Pollution Control | 3 |
| CEE 422 | Design \& Construction Project Management | 3 |
| CHM 200 | Chemistry \& Society | 3 |
| CHM 313 | Organic Chemistry | 3 |
| CJS 305 | Criminal Law | 3 |
| CJS 315 | Criminal Procedure | 3 |
| CMM 416 | Development of Mass Media | 3 |
| ECE 203 | Introduction to MATLAB Programming | 1 |
| ECO 203 | Principles of Microeconomics | 3 |
| ECO 204 | Principles of Macroeconomics | 3 |
| EDT 322 | Perspectives on Education \& Social Justice | 3 |
| EGR 103 | Engineering Innovation | 2 |
| EGR 201 | Engineering Mechanics | 3 |
| EGR 202 | Engineering Thermodynamics | 3 |
| EGR 203 | Electrical \& Electronic Circuits | 3 |
| EGR 311 | Principles of Nanotechnology | 3 |
| ENG 370 | Report \& Proposal Writing | 3 |
| ENG 371 | Technical Communication | 3 |
| ENG 372 | Business Communication | 3 |
| ENG 373 | Medical Writing | 3 |
| FIN 250 | Personal Finance | 3 |
| GEO 103 | Principles of Physical Geography | 3 |
| GEO 218 | Engineering Geology | 3 |
| GEO 450 | Applied Geographic Information Systems | 4 |
| GEO 485 | Geographic Information Systems Applications in Water Resources Planning \& Management | 4 |
| HST 220 | Survey of Ancient History | 3 |
| HST 260 | Survey of Asian History | 3 |
| HST 280 | Survey of Middle Eastern History | 3 |
| HST 320 | European Military History | 3 |
| HST 321 | Modern France | 3 |


| HST 322 | History of England | 3 |
| :---: | :---: | :---: |
| HST 331 | History of India | 3 |
| HST 335 | History of South Asia | 3 |
| HST 342 | Environmental History of the Americas | 3 |
| HST 343 | History of Civil Engineering | 3 |
| HST 356 | Comparative History of Women in the Third World | 3 |
| HST 357 | Latin America in the Twentieth Century | 3 |
| HST 358 | Social \& Cultural History of Latin America | 3 |
| HST 359 | History of American City Planning | 3 |
| HST 370 | Economic \& Business History of the United States | 3 |
| HST 374 | Ireland \& America | 3 |
| HST 398 | History of Blacks in the United States, 1526-1900 | 3 |
| HST 399 | History of Blacks in the United States Since 1900 | 3 |
| MIS 300 | Survey of Management Information Systems | 3 |
| MIS 302 | Systems Thinking | 3 |
| MKT 300 | Survey of Marketing | 3 |
| OPS 300 | Introduction to Operations \& Supply Management | 3 |
| PHL 302 | Symbolic Logic | 3 |
| PHL 304 | Philosophy of Human Nature | 3 |
| PHL 306 | Philosophy of Knowledge | 3 |
| PHL 307 | Philosophy \& Women | 3 |
| PHL 323 | Philosophy \& Literature | 3 |
| PHL 324 | Philosophy \& Film | 3 |
| PHL 325 | Philosophy of Music | 3 |
| PHL 350 | Classical Greek Philosophy | 3 |
| PHL 360 | Existentialism | 3 |
| PHL 370 | Political Philosophy | 3 |
| PHL 378 | Concept of the Self | 3 |
| PHY 207 | General Physics II - Electricity \& Magnetism | 3 |
| PHY 232 | The Physics of Waves | 3 |
| SCI 230 | Organisms, Evolution \& Environment | 3 |
| SCI 240 | Organisms, Evolution \& Health | 3 |
| SCI 300 | Computing in a Global Society | 3 |
| SCI 310 | Earth \& Sky | 3 |
| SOC 204 | Modern Social Problems | 3 |
| SOC 343 | Mass Communication in Modern Society | 3 |
| SOC 351 | Urban Sociology | 3 |
| SOC 353 | Internet Community | 3 |
| SOC 435 | Economy \& Society | 3 |
| Crossing Boundaries - Integrative |  |  |
| ASI 320 | Cities \& Energy | 3 |
| ASI 322 | Cities \& Suburbs: The Influence of Place (Social Science) | 3 |
| ASI 347 | Physics \& Literature | 3 |
| ASI 495 | Integrative Capstone Project, India Program | 0 |
| EDT 323 | Historical Literacy \& Historical Thinking | 3 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings | 3 |
| ENG 321 | Reading Popular Music | 3 |
| HSS 275 | History of Physical Education \& Sport | 3 |
| HSS 295 | Nutrition \& Health | 3 |


| HSS 360 | Sport \& Bodies | 3 |
| :---: | :---: | :---: |
| HST 341 | Historical Perspectives on Science, Technology \& Society | 3 |
| HST 344 | History of Science, Technology \& the Modern Corporation | 3 |
| HST 349 | Technology \& the Culture of War | 3 |
| HST 355 | American Urban History | 3 |
| HST 376 | Social \& Cultural History of the United States | 3 |
| MGT 490 | Managing the Enterprise | 3 |
| MTH 219 | Applied Differential Equations | 3 |
| MUS 205 | Music, Instruments \& Techonology | 3 |
| MUS 301 | Music History \& Literature I | 3 |
| MUS 302 | Music History \& Literature II | 3 |
| MUS 328 | History of the American Musical | 3 |
| PHL 314 | Philosophy of Law | 3 |
| PHL 320 | Philosophy of Art | 3 |
| PHL 330 | Philosophy of Science | 3 |
| PHL 355 | Asian Philosophy | 3 |
| PHL 363 | African Philosophy | 3 |
| PHL 364 | Race, Gender \& Philosophy | 3 |
| PHL 377 | Philosophy \& Mass Media | 3 |
| PHL 379 | Latin America Philosophy | 3 |
| PHL 380 | Language \& Our World | 3 |
| REL 372 | Religion \& Film | 3 |
| REL 373 | Religion \& Literature | 3 |
| REL 374 | Religion \& the Arts | 3 |
| REL 375 | Religion \& Science | 3 |
| SEE 250 | Introduction to Sustainability, Energy \& the Environment | 3 |
| SEE 303 | Constructions of Place | 3 |
| SEE 401 | Sustainability Research I | 3 |
| SOC 326 | Law \& Society | 3 |
| SOC 328 | Racial \& Ethnic Minorities | 3 |
| SOC 330 | Perspectives on Aging | 3 |
| SOC 333 | Sociology of Sexualities | 3 |
| SOC 339 | Social Inequality | 3 |
| SWK 307 | Mental Health Services | 3 |
| SWK 330 | Perspectives on Aging | 3 |
| SWK 335 | Social Work \& Environmental Justice | 3 |
| SWK 360 | International Social Work | 3 |
| VAH 320 | Latin American Art | 3 |
| VAH 330 | Arts of Asia | 3 |
| VAH 360 | Art History \& Feminism | 3 |
| Advanced Religous Studies |  |  |
| REL 304 | Hinduism | 3 |
| REL 306 | Buddhism | 3 |
| REL 308 | Islam | 3 |
| REL 315 | The Gospels | 3 |
| REL 318 | Studies in Paul | 3 |
| REL 323 | History of Christianity I | 3 |
| REL 328 | United States Catholic Experience | 3 |


| REL 344 | Christian Marriage | 3 |
| :--- | :--- | :--- |
| REL 356 | The Christian Tradition of Prayer | 3 |
| REL 358 | Liberation Theology | 3 |
| REL 360 | Christian Ethics | 3 |
| REL 363 | Faith \& Justice | 3 |
| REL 365 | Christian Ethics \& the Environment | 3 |
| REL 366 | The Holocaust: Theological \& Religious | 3 |
|  | Responses |  |
| REL 367 | Christian Ethics \& Health Care Issues | 3 |
| REL 368 | Christian Ethics \& the Business World | 3 |
| REL 369 | Christian Ethics \& Engineering | 3 |
| REL 372 | Religion \& Film | 3 |
| REL 373 | Religion \& Literature | 3 |
| REL 374 | Religion \& the Arts | 3 |
| REL 375 | Religion \& Science | 3 |
| REL 377 | The Inner Journey in Myth, Bible \& Literature | 3 |
| REL 471 | Women \& Religion | 3 |

## Advanced Philosophical Studies

| ASI 371 | Professional Ethics in a Global Community Business Administration | 3 |
| :---: | :---: | :---: |
| ASI 372 | Professional Ethics in a Global Community Education | 3 |
| ASI 373 | Professional Ethics in a Global Community Engineering | 3 |
| ASI 374 | Professional Ethics in a Global Community Philosophical | 3 |
| ASI 375 | Professional Ethics in a Global Community Religious | 3 |
| EDT 305 | Philosophy \& History of American Education | 3 |
| PHL 301 | Practical Logic | 3 |
| PHL 302 | Symbolic Logic | 3 |
| PHL 304 | Philosophy of Human Nature | 3 |
| PHL 306 | Philosophy of Knowledge | 3 |
| PHL 307 | Philosophy \& Women | 3 |
| PHL 310 | Social Philosophy | 3 |
| PHL 312 | Ethics | 3 |
| PHL 313 | Business Ethnics | 3 |
| PHL 314 | Philosophy of Law | 3 |
| PHL 315 | Medical Ethics | 3 |
| PHL 316 | Engineering Ethics | 3 |
| PHL 317 | Ethics \& Modern War | 3 |
| PHL 318 | Family Ethics | 3 |
| PHL 319 | Information Ethics | 3 |
| PHL 320 | Philosophy of Art | 3 |
| PHL 321 | Environmental Ethics | 3 |
| PHL 323 | Philosophy \& Literature | 3 |
| PHL 324 | Philosophy \& Film | 3 |
| PHL 325 | Philosophy of Music | 3 |
| PHL 334 | Philosophy \& Ecology | 3 |
| PHL 350 | Classical Greek Philosophy | 3 |
| PHL 355 | Asian Philosophy | 3 |
| PHL 360 | Existentialism | 3 |


| PHL 363 | African Philosophy | 3 |
| :--- | :--- | :--- |
| PHL 364 | Race, Gender \& Philosophy | 3 |
| PHL 370 | Political Philosophy | 3 |
| PHL 371 | Philosophy \& Human Rights | 3 |
| SEE 401 | Sustainability Research I | 3 |
| SEE 402 | Sustainability Research II | 3 |

## Advanced Historical Studies

| AMS 300 | American Cultures | 3 |
| :--- | :--- | :--- |
| ASI 120 | Development of Western Culture in a Global | 8 |
|  | Context |  |
| ASI 320 | Cities \& Energy | 3 |

CMM 416 Development of Mass Media 3
HSS 275 History of Physical Education \& Sport 3
HST 220 Survey of Ancient History 3
HST 251 American History to 18653
HST 252 American History Since 18653
HST 260 Survey of Asian History 3
HST 280 Survey of Middle Eastern History 3
HST 305 Medieval Europe 3
HST 307 Renaissance \& Reformation 3
HST $313 \quad$ The Dual Revolution \& its Consequences - Europe 3
HST 314 Modern Europe in Decline 1890-1945 3
HST 315 Europe in the Postwar Era 1945-Present 3
HST 320 European Military History 3
HST 321 Modern France 3
HST 322 History of England 3
HST 326 Russia, The Soviet Union \& Beyond 1860-Present 3
HST 331 History of India 3
HST 333 Modern Middle East 3
HST 334 History of the Palestinian-Isreali Conflict 3
HST 335 History of South Asia 3
HST 337 History of Africa - 19th Century to Present 3
HST 341 Historical Perspectives on Science, Technology \& 3
Society
HST 342 Environmental History of the Americas 3
HST 343 History of Civil Engineering 3
HST $344 \quad$ History of Science, Technology \& the Modern 3
Corporation
HST 346 History of American Aviation 3
HST 349 Technology \& the Culture of War 3
HST 351 American Women's \& Gender History 3
HST 353 History of Women in European Societies 3
HST 355 American Urban History 3
HST 356 Comparative History of Women in the Third World 3
HST 357 Latin America in the Twentieth Century 3
HST 358 Social \& Cultural History of Latin America 3
HST $359 \quad$ History of American City Planning
HST 365 American Films as History 3
HST 370 Economic \& Business History of the United States 3
HST 372 History of Religion in the United States 3
HST 374 Ireland \& America 3

| HST 375 | History of United States Foreign Relations | 3 |
| :--- | :--- | :--- |
| HST 376 | Social \& Cultural History of the United States | 3 |
| HST 382 | History of Mexico | 3 |
| HST 383 | History of the Caribbean | 3 |
| HST 398 | History of Blacks in the United States, 1526-1900 | 3 |
| HST 399 | History of Blacks in the United States Since 1900 | 3 |
| MUS 301 | Music History \& Literature I | 3 |
| MUS 302 | Music History \& Literature II | 3 |
| VAH 360 | Art History \& Feminism | 3 |
| VAH 382 | History of Photography II | 3 |
| VAH 480 | Twentieth Century Art I | 3 |

## Diversity and Social Justice

| ANT 150 | Cultural Anthropology | 3 |
| :---: | :---: | :---: |
| ANT 336 | Epidemics, Power \& the Human Condition | 3 |
| ANT 368 | Immigration \& Immigrants | 3 |
| CJS 336 | Comparative Criminal Justice Systems | 3 |
| EDT 222 | Development in MC and AYA | 3 |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings | 3 |
| ENG 333 | Images of Women in Literature | 3 |
| ENG 335 | African American Literature | 3 |
| ENG 336 | Gender in Fiction | 3 |
| ENG 339 | American Indian Literature | 3 |
| ENG 340 | The Prison in Literature | 3 |
| ENG 341 | Asian-American Literature | 3 |
| ENG 345 | Colonial \& Postcolonial Literature | 3 |
| ENG 346 | Literature \& Human Rights | 3 |
| ENG 360 | US Latina/Latino Literature | 3 |
| HSS 220 | Adapted Physical Activity | 3 |
| HSS 275 | History of Physical Education \& Sport | 3 |
| HSS 302 | Global \& Cultural Nutrition | 3 |
| HSS 354 | Sport in the Global Community | 3 |
| HST 334 | History of the Palestinian-Isreali Conflict | 3 |
| HST 351 | American Women's \& Gender History | 3 |
| HST 353 | History of Women in European Societies | 3 |
| HST 355 | American Urban History | 3 |
| HST 365 | American Films as History | 3 |
| HST 374 | Ireland \& America | 3 |
| MUS 303 | Introduction to Music of the World | 3 |
| PHL 355 | Asian Philosophy | 3 |
| PHL 363 | African Philosophy | 3 |
| PHL 379 | Latin America Philosophy | 3 |
| REL 358 | Liberation Theology | 3 |
| REL 360 | Christian Ethics | 3 |
| REL 363 | Faith \& Justice | 3 |
| REL 471 | Women \& Religion | 3 |
| SOC 328 | Racial \& Ethnic Minorities | 3 |
| SOC 333 | Sociology of Sexualities | 3 |
| SOC 339 | Social Inequality | 3 |
| SOC 432 | Structure of Priviledge | 3 |
| SWK 335 | Social Work \& Environmental Justice | 3 |


| SWK 360 | International Social Work | 3 |
| :---: | :---: | :---: |
| VAH 320 | Latin American Art | 3 |
| Major Capstone or Course Experience |  |  |
| ACC 497 | Professional Work Experience | 1-6 |
| AMS 400 | Interdisciplinary Research | 3 |
| ASI 397 | Capstone Seminar on Human Rights Advocacy | 3 |
| BIO 420 | Seminar | 1 |
| CEE 450 | Civil Engineering Design | 3 |
| CHM 496 | Professional Practices Seminar | 0 |
| CJS 447 | Senior Seminar in Criminal Justice Studies | 3 |
| CME 431 | Chemical Engineering Design II | 3 |
| CME 453L | Process Control Laboratory | 2 |
| CMM 480 | Communication Capstone Project \& Presentation | 3 |
| CPS 490 | Senior Capstone Project \& Presentation | 1 |
| ECE 432L | Multidisciplinary Design II | 3 |
| ECO 490 | Senior Seminar in Applied Economics | 3 |
| ECT 490 | Senior Project | 3 |
| EDT 436 | AYA Capstone Course | 3 |
| EDT 465E | Internship \& Practicum in Early Childhood Administration | 6 |
| EDT 471 | Student Teaching- Foreign Languages K-12 | 12 |
| EDT 474 | Student Teaching- Middle Childhood | 12 |
| EDT 475 | Student Teaching-Adolescent to Young Adult | 12 |
| EDT 476 | Student Teaching- Intervention Specialist: Mild/ Moderate | 12 |
| ENG 490 | Seminar | 3 |
| FIN 479 | Seminar in Bond Portfolio Management | 3 |
| FIN 493 | Seminar in Investments | 3 |
| GEO 477 | Honors Thesis Project | 3 |
| GEO 478 | Honors Thesis Project | 3 |
| GEO 498 | Geological Research \& Thesis | 4 |
| GNS 480 | Senior Capstone | 0 |
| HSS 455 | Selected Studies in Exercise Science | 1-3 |
| HSS 465 | Physical Therapy Seminar | 3 |
| HSS 485 | Sport Management Internship | 3 |
| HSS 490 | Exercise Science Internship - On Campus | 2 |
| HSS 496 | Medical Nutrition Therapy II | 3 |
| HST 498 | History Capstone Seminar | 3 |
| IET 490 | Senior Project | 3 |
| INB 450 | Seminar in Current Global Issues | 3 |
| INS 499 | Senior Capstone Seminar | 3 |
| LNG 495 | The Language Major in Professional Careers | 1 |
| MCT 490 | Mechanical Engineering Technology Senior Project | 3 |
| MED 480 | Pre-Medicine Capstone | 1 |
| MEE 432L | Multidisciplinary Engineering Design Laboratory II | 3 |
| MFG 490 | Senior Project | 3 |
| MGT 410 | Senior Seminar in Experiencing Leadership | 3 |
| MGT 430 | Senior Seminar in Entrepreneurship | 3 |
| MIS 465 | MIS Project I-Analysis \& Design in Teams | 3 |
| MIS 475 | MIS Project II-Design \& Implementation in Teams | 3 |


| MKT 450 | Buyer Behavior \& Market Analysis | 6 |
| :--- | :--- | ---: |
| MKT 455 | Marketing Planning \& Strategy | 3 |
| MTH 480 | Math Capstone | 3 |
| MUS 450 | Degree Recital | 0 |
| MUS 480 | Capstone Project Seminar | 1 |
| MUS 481 | Capstone Project \& Presentation | 1 |
| OPS 485 | Capstone Operations \& Supply Management | 1 |
|  | Project I |  |
| OPS 495 | Capstone Operations \& Supply Management | 5 |
|  | Project II |  |
| PHL 440 | Seminar - Advanced Problems in Philosophy | 3 |
| PHL 451 | Seminar - Individual Philosophers | 3 |
| PHL 461 | Seminar - Contemporary Epistemology | 3 |
| PHL 462 | Seminar - Contemporary Ethics | 3 |
| PHL 463 | Seminar - Contemporary Metaphysics | 3 |
| PHY 480 | Capstone Project \& Presentation | 1 |
| POL 499 | Political Science Capstone | 3 |
| PSY 471 | History of Psychology | 3 |
| PSY 478 | Honors Thesis Project | 3 |
| PSY 480 | Senior Seminar Capstone | 3 |
| PSY 499 | Independent Research Seminar Capstone | 3 |
| REL 490 | Capstone Seminar | 3 |
| SOC 409 | Senior Project | 3 |
| THR 440 | Problems in Theatre II | 3 |
| THR 490 | Special Problems in Theatre | $3-5$ |
| VAD 498 | Senior/Professional Seminar | 3 |
| VAD 499 | Portfolio and Paper | 3 |
| VAF 498 | Senior/Professional Seminar- Fine Arts | 3 |
| VAF 499 | Portfolio \& Paper- Fine Arts | 1 |
| VAH 485 | Art History Seminar | 3 |
| VAP 498 | Senior/Professional Seminar- Photography | 3 |
| VAP 499 | Portfolio and Paper | 1 |
| VAR 495 | Senior Project Seminar | 3 |
| VAR 496 | Project, Presentation \& Paper | 3 |
| WGS 490 | Senior Seminar in Women's \& Gender Studies | 3 |
|  |  | 3 |

# Undergraduate - College of Arts and Sciences 

Paul H. Benson, Dean
Donald L. Pair, Associate Dean
Donald J. Polzella, Associate Dean
Cynthia T. Shafer, Assistant Dean
Kimberly A. Trick, Assistant Dean
Timothy A. Wilbers, Assistant Dean
The College of Arts and Sciences is a distinctive learning community that forms the vital center of the University of Dayton. In the finest tradition of liberal education, the College is committed to excellence in the discovery, integration, dissemination, and application of knowledge. Academic programs provide instruction in critical thinking and expression, social and cultural criticism, computation, scientific reasoning, the creative and performing arts, historical analysis, and religious and moral awareness. The College of Arts and Sciences takes as its mission the Marianist principle of educating the whole person and enabling all members of our learning community to fulfill their potential.

The faculty of the College of Arts and Sciences demonstrate connected learning and scholarship by integrating teaching, research, and service. They engage students from across the University in this process through traditional and innovative approaches to learning. The faculty understand that the principles of liberal education emerge not only from the classroom, studio, and laboratory, but also from the many resources the students have within their reach: advisement, mentoring; campus ministry; social and professional clubs and societies; campus media and publications; fine arts events; and membership on departmental and campus-wide committees where students gain experience in working with others and contribute to the wider University community. Taken together, these dimensions of liberal education form the basis for lifelong intellectual, professional, and personal growth.

The College of Arts and Sciences affirms its commitment to the Catholic and Marianist tradition. In humanities and social science programs, in the physical and life sciences, and in the creative and performing arts, the College strives to ensure that its graduates are distinguished by their discernment and intellectual rigor, their broad base of learning, and their sense of moral responsibility. And through their participation in a vital learning community, the College ensures the graduates will be distinguished by their appreciation and respect for diversity, their commitment to service, and their ability to affect positively individual lives and the common good.

## Academic Programs

For detailed information on specific majors and minors, please visit the links below.

The major is defined as a block of courses totaling at least 24 semester hours of upper-level work in a single discipline. Transfer students are required to take a minimum of 12 upper-level semester hours in the major at the University of Dayton. Some departments may have additional requirements for transfer students. These additional requirements are defined specifically in the departmental listings.

Single-discipline and interdisciplinary minors are defined in the departmental listings. Transfer students must take a minimum of 6
upper-level semester hours in the minor at the University of Dayton. Some departments may have additional requirements for transfer students. These additional requirements are defined specifically in the departmental listings.

## The Bachelor of Arts is offered in:

- American Studies (p. 119)
- Art History (p. 264)
- Chemistry (p. 134)
- Communication (p. 142)
- Criminal Justice Studies (p. 151)
- Economics (p. 155)
- English (p. 158)
- French (p. 172)
- German (p. 173)
- History (p. 182)
- Human Rights Studies (p. 233)
- International Studies (p. 188)
- Languages (p. 173)
- Mathematics (p. 195)
- Music (p. 203)
- Philosophy* (p. 222)
- Political Science (p. 233)
- Psychology (p. 243)
- Religious Studies (p. 247)
- Sociology* (p. 254)
- Spanish (p. 174)
- Theatre (p. 260)
- Visual Arts (p. 263)
- Women's and Gender Studies (p. 276)
* Major programs offered in India in conjunction with the Marianists.


## The Bachelor of Science is offered in:

- Applied Mathematical Economics (p. 197)
- Biochemistry (p. 135)
- Biology (p. 125)
- Chemistry (p. 134)
- Computer Information Systems (p. 147)
- Computer Science (p. 148)
- Environmental Biology (p. 127)
- Environmental Geology (p. 166)
- Geology (p. 168)
- Mathematics (p. 195)
- Medicinal-Pharmaceutical Chemistry (p. 138)
- Physical Science (p. 228)
- Physics (p. 229)
- Physics-Computer Science (p. 230)
- Predentistry (p. 240)
- Premedicine (p. 242)
- Psychology (p. 245)


## Other programs leading to the bachelor's degree:

- Visual Arts Education (B.F.A.) (p. 266)
- Fine Arts (B.F.A.) (p. 267)
- General Studies (B.G.S.) (p. 165)
- Graphic Design (B.F.A.) (p. 268)
- Music Composition (B.Mus.) (p. 208)
- Music Education (B.Mus.) (p. 203)
- Music Performance (B.Mus.) (p. 212)
- Music Therapy (B.Mus.) (p. 214)
- Photography (B.F.A.) (p. 269)


## Established Interdisciplinary Majors

American Studies (p. 119), Criminal Justice Studies (p. 151),International Studies (p. 188), Premedicine (p. 242), Predentistry (p. 240), and Women's and Gender Studies (p. 276) are present examples of established interdisciplinary majors. Such programs are established by interdisciplinary committees and administered by the program directors.

## Individually Designed Interdisciplinary Majors

Students demonstrating extraordinary interest, special skills or needs, and sound academic status may initiate individually designed majors. Students carry the responsibility to find a faculty mentor or advisor for such majors. All University and College requirements for the Bachelor of Arts or Bachelor of Science degree must be fulfilled. The degree received will be a Bachelor of Arts or Science in Interdisciplinary Studies. Candidacy for the Bachelor of Arts or Science in Interdisciplinary Studies must be declared no later than the last semester of the junior year. Long-range plans for such majors must be submitted to the appropriate chairpersons and the dean for final approval. Plans may be altered with appropriate supporting rationale and the approval of the chairperson and dean.

## General Requirements for all Bachelor of Arts Programs

A minimum of 124 semester hours of approved coursework must be presented for the B.A. At least 48 semester hours must be completed at the 300-400 level. For limitations on credit and restrictions on courses, consult the chairperson or the dean. No more than 45 hours of the minimum 124 hours may be completed in a student's major discipline.

## Introduction to the University

In the first semester, students take a course that introduces them to the University and to their major field of study. Undeclared students take specific sections of this course.

## Major Concentration

Most major programs require between 30 and 45 semester hours. For department or program requirements, consult program schedules or the department chairperson or program director.

## Liberal Studies Curriculum

Every student will complete the Liberal Studies Curriculum. This Curriculum provides students with a breadth of study and experiences in the humanities, the creative and performing arts, the social sciences, and the natural sciences. It complements specialized study in a major and presupposes, builds upon and enhances the University's Common Academic Program (CAP). Where appropriate, credits in the Liberal Studies Curriculum may apply to other requirements but no more than six hours may be in the departmental major concentration. The Liberal Studies Curriculum includes:

## Philosophy and Religious Studies

Students complete 12 semester hours including a course in philosophy and a course in religious studies as part of the CAP First-Year Humanities Commons requirement, and two additional CAP Advanced Studies approved courses in philosophy and/or religious studies.

## History

Students complete 6 semester hours including a course as part of the CAP First-Year Humanities Commons and one additional CAP Advanced Studies approved course in historical study.

## Literature

Students complete 3 semester hours in literature selected from a list of approved courses. ${ }^{1}$

## Creative and Performing Arts

Students complete 3 semester hours in theory, appreciation, or history of visual arts, music, or theater selected from a list of approved courses; or complete 3 semester hours in production and performance selected from a list of approved courses. ${ }^{2}$

## L2 Proficiency:

(Proficiency in a language other than English) Students demonstrate basic practical communication in a language other than English in one of three ways:

1. Students may choose to demonstrate proficiency equivalent to the completion of the 201 level by examination (Zero semester hours).
or
2. Students may choose to demonstrate proficiency equivalent to the completion of the 141 level by examination, and one of the following four sub-options matching the language course at the 141 level (Zero to three semester hours):
a. 201 level language course
b. Approved study abroad/intercultural experience
c. Approved service learning experience
d. Approved Contextual Course. ${ }^{3}$

## or

3. Students may choose to demonstrate proficiency by completion of a language course at the 141 level and any necessary prerequisites, and one of the following four sub-options matching the language course at the 141 level (four to eleven semester hours):
a. 201 level language course
b. Approved study abroad/intercultural experience
c. Approved service learning experience
d. Approved Contextual Course. ${ }^{3}$

No credit is awarded through the proficiency examination. The range of semester hours to complete the L2 requirement in Arabic, Chinese and Hindi is zero to twelve.

## Social Sciences

Students complete 12 semester hours including two courses at the introductory level from at least two different traditional disciplines:

| ANT 150 | Cultural Anthropology | 3 |
| :--- | :--- | :--- |
| ECO 203 | Principles of Microeconomics | 3 |
| POL 101 | Global Politics | 3 |
| or POL 201 | The American Political System |  |


| PSY 101 | Introductory Psychology | 3 |
| :--- | :--- | :--- |
| SOC 101 | Principles of Sociology | 3 |

or SOC 204 Modern Social Problems
One course at the 300-400 level in one of the disciplines in which an introductory course was taken, and one additional course from any of the traditional disciplines or from the list of courses approved for social science. (Students in the E-11 program may take two approved courses in the School of Education).

## Mathematics

Students complete 3 semester hours selected from courses in the Department of Mathematics (MTH 205 excluded).

## Natural Sciences

Students complete a sequence of 3 lecture courses with 2 accompanying laboratories in the Integrated Natural Science Sequence for a total of 11 semester hours. Students who wish to do more advanced study in science may complete 9 semester hours in science courses approved for majors in the departments of biology, chemistry, geology, and physics and 2 sem. hrs. of accompanying laboratories in lieu of the Integrated Natural Science Sequence.

| ${ }^{1}$ Courses for Literature are as follows: |  |  |
| :---: | :---: | :---: |
| CLA 350 | Classical Literature in Translation | 3 |
| ENG 151 | Introduction to Literature | 3 |
| ENG 203 | Major British Writers | 3 |
| ENG 204 | Major American Writers | 3 |
| ENG 205 | Major World Writers | 3 |
| ENG 210 | Poetry | 3 |
| ENG 230 | Topics in Literature | 1-6 |
| ENG 301 | Survey of Early English Literature | 3 |
| ENG 302 | Survey of Later English | 3 |
| ENG 305 | Survey of American Literature | 3 |
| ENG 306 | Survey of Continental Literature | 3 |
| ENG 317 | Contemporary Poetry | 3 |
| ENG 319 | Contemporary Fiction | 3 |
| ENG 320 | Contemporary Drama | 3 |
| ENG 322 | Masterpieces of World Literature | 3 |
| ENG 323 | Literature of the Christian Tradition | 3 |
| ENG 324 | The Novel | 3 |
| ENG 325 | Science Fiction | 3 |
| ENG 326 | Sport \& Literature | 3 |
| ENG 327 | Studies in Popular Fiction | 3 |
| ENG 328 | American Nobel Authors | 3 |
| ENG 329 | Short Story | 3 |
| ENG 330 | Development of Drama | 3 |
| ENG 332 | Studies in Literature \& Film | 3 |
| ENG 333 | Images of Women in Literature | 3 |
| ENG 334 | Modern Men -- Images | 3 |
| ENG 335 | African American Literature | 3 |
| ENG 336 | Gender in Fiction | 3 |
| ENG 337 | Studies in Folklore | 3 |
| ENG 338 | Images of Business | 3 |


| ENG 339 | American Indian Literature | 3 |
| :---: | :---: | :---: |
| ENG 340 | The Prison in Literature | 3 |
| ENG 343 | Literature of the Fifties | 3 |
| ENG 344 | Literature of the Sixties | 3 |
| ENG 345 | Colonial \& Postcolonial Literature | 3 |
| ENG 348 | Modern Irish Literature | 3 |
| ENG 350 | European Literature of Antiquity | 3 |
| ENG 351 | European Literature of Middle Ages | 3 |
| ENG 353 | Literature of the Renaissance | 3 |
| ENG 354 | Literature of the Enlightenment | 3 |
| ENG 355 | Literature of the Romantic Age | 3 |
| ENG 356 | European Literature of the 19th Century | 3 |
| ENG 357 | European Literature of the Early 20th Century | 3 |
| ENG 358 | Contemporary Literature of Europe | 3 |
| ENG 362 | Shakespeare | 3 |
| ENG 363 | Shakespeare's Worlds | 3 |
| ENG 380 | Studies in Literature | 1-6 |
| ENG 383 | Tragic Dilemma | 3 |
| ENG 384 | Christianity \& Modern Poetry | 3 |
| ENG 385 | Religion \& Literature | 3 |
| ENG 405 | Chaucer | 3 |
| ENG 407 | Medieval English Literature | 3 |
| ENG 410 | Early Renaissance Literature | 3 |
| ENG 414 | Later Renaissance Literature | 3 |
| ENG 431 | Milton | 3 |
| ENG 433 | Studies in Neo-Classical Literature | 3 |
| ENG 438 | English Romanticism | 3 |
| ENG 444 | Studies in 19th Century English Literature | 3 |
| ENG 448 | 20th Century British Literature | 3 |
| ENG 451 | American Romanticism | 3 |
| ENG 453 | American Realism \& Naturalism | 3 |
| ENG 455 | 20th Century American Literature | 3 |
| ENG 482 | Modern Poetry | 3 |
| FRN 350 | French Literature in Translation | 3 |
| FRN 352 | Old World Meets New (ENG) | 3 |
| FRN 360 | Explication De Textes | 3 |
| FRN 361 | Survey of French Literature I | 3 |
| FRN 362 | Survey of French Literature II | 3 |
| FRN 381 | History of French Cinema | 3 |
| FRN 450 | French Literature | 3 |
| FRN 452 | Old World Meets New (FRN) | 3 |
| GER 350 | German Literature \& Civilization | 3 |
| GER 361 | Survey of German Literature I | 3 |
| GER 362 | Survey of German Literature II | 3 |
| GER 450 | German Literature | 3 |
| ITA 361 | Survey of Italian Literature I | 3 |
| ITA 362 | Survey of Italian Literature II | 3 |
| SPN 350 | Hispanic Literature in Translation | 3 |
| SPN 361 | Survey of Spanish Literature I | 3 |
| SPN 362 | Survey of Spanish Literature II | 3 |
| SPN 363 | Survey of Spanish-American Literature I | 3 |
| SPN 364 | Survey of Spanish-American Literature II | 3 |


| SPN 450 | Topics in Spanish Literature | 3 |
| :---: | :---: | :---: |
| SPN 451 | Topics in Spanish-American Literature | 3 |
| SPN 471 | Topics in Spanish-American Literature of the Twentieth Century | 3 |
| SPN 472 | Topics in Spanish-American Literature of the Twentieth Century II | 3 |
| ${ }^{2}$ Courses for Creative and Performing Arts are as follows: |  |  |
| ASI 214 | Dramatic Kinesics in a Foreign Language | 1 |
| ASI 341 | Special Topics in Arts Study | 1-3 |
| CMM 311 | Studies in Oral Performance | 3 |
| CMM 331 | Feature Writing | 3 |
| CMM 332 | Publication Design | 3 |
| CMM 333 | Free Lance Writing | 3 |
| CMM 341 | Audio Production | 3 |
| CMM 342 | Fundamentals of Video Production | 3 |
| CMM 343 | Scriptwriting for Electronic Media | 3 |
| CMM 344 | Multimedia Design \& Production I | 3 |
| CMM 351 | Public Speaking | 3 |
| CMM 442 | Advanced Television Production | 3 |
| CMM 444 | Multimedia Design \& Producation II | 3 |
| CMM 449 | Topics in Electronic Media | 3 |
| ENG 282 | Introduction to Writing Poetry | 3 |
| ENG 284 | Introduction to Writing Fiction | 3 |
| ENG 286 | Introduction to Writing Drama | 3 |
| ENG 308 | Intermediate Poetry Workshop | 3 |
| ENG 310 | Intermediate Fiction Workshop | 3 |
| ENG 312 | Advanced Writing of Drama | 3 |
| ENG 331 | Studies in Film | 3 |
| ENG 382 | Mozart's Operas | 3 |
| MUS 110 | Fundamentals of Music | 2 |
| MUS 111 | Theory of Music I | 2 |
| MUS 112 | Theory of Music II | 2 |
| MUS 113 | Aural Skills I | 2 |
| MUS 114 | Aural Skills II | 2 |
| MUS 115 | Music in Theory \& Practice | 3 |
| MUS 116 | Music in Theory \& Practice | 3 |
| MUS 191 | Voice Class | 2 |
| MUS 195 | Beginning Guitar Class I | 1 |
| MUS 196 | Group Piano I | 1 |
| MUS 201 | Music In Concert | 3 |
| MUS 203 | Sights \& Sounds of Music | 3 |
| MUS 205 | Music, Instruments \& Techonology | 3 |
| MUS 295 | Beginning Guitar Class II | 1 |
| MUS 301 | Music History \& Literature I | 3 |
| MUS 302 | Music History \& Literature II | 3 |
| MUS 303 | Introduction to Music of the World | 3 |
| MUS 304 | History of American Music | 3 |
| MUS 305 | African-American Sacred Music | 3 |
| MUS 306 | History of American Jazz | 3 |
| MUS 307 | Development of American Popular Song | 3 |
| MUS 309 | Operal History \& Literature | 3 |


| MUS 310 | Mozart's Operas | 3 |
| :---: | :---: | :---: |
| MUS 328 | History of the American Musical | 3 |
| MUS 399 | Performance Studies | 1-2 |
| MUS 491 | University Orchestra | 1 |
| MUS 492 | Symponic Wind Ensemble | 1 |
| MUS 493 | University Chorale | 1 |
| MUS 499 | Performance Studies | 4 |
| THR 100 | Theatre Laboratory | 1-3 |
| THR 105 | Introduction to Theatre | 3 |
| THR 201 | Basic Dance for the Performing Artist | 2-3 |
| THR 202 | Stage Makeup | 2 |
| THR 203 | Technical Production | 3 |
| THR 251 | Beginning Tap Dance | 2 |
| THR 261 | Beginning Jazz Dance | 2-3 |
| THR 271 | Beginning Ballet | 2-3 |
| THR 300 | Theatre Laboratory | 1-3 |
| THR 301 | Intermediate Dance for the Performing Artist | 2 |
| THR 303 | Scene Painting | 3 |
| THR 305 | Theatre Stagecraft | 3 |
| THR 307 | Theatre Lighting | 3 |
| THR 310 | Acting I | 3 |
| THR 312 | Film \& Television Acting | 3 |
| THR 320 | Movement \& Voice for the Stage | 3 |
| THR 323 | Acting II | 3 |
| THR 325 | Theory \& Criticism of the Stage I | 3 |
| THR 326 | Theory \& Criticism of the Stage II | 3 |
| THR 330 | Concepts of Scene Design | 3 |
| THR 344 | Acting/Directing for Musical Theatre | 3 |
| THR 351 | Intermediate Jazz Dance | 2 |
| THR 361 | Intermediate Jazz Dance | 2 |
| THR 371 | Intermediate Ballet | 2 |
| VAF 104 | Foundation Drawing | 3 |
| VAF 112 | Foundation 2-D Design | 3 |
| VAF 117 | Foundation 3-D Design | 3 |
| VAF 204 | Drawing II | 3 |
| VAF 226 | Painting I | 3 |
| VAF 228 | Watercolor I | 3 |
| VAF 232 | Sculpture I | 3 |
| VAF 240 | Ceramics I | 3 |
| VAF 253 | Printmaking I | 3 |
| VAF 304 | Drawing III | 3 |
| VAF 325 | Figure Painting | 3 |
| VAF 326 | Painting II | 3 |
| VAF 328 | Watercolor II | 3 |
| VAF 332 | Scripture II | 3 |
| VAF 342 | Ceramics III | 3 |
| VAF 353 | Printmaking II | 3 |
| VAH 101 | Introduction to the Visual Arts | 3 |
| VAH 201 | Survey of Art I | 3 |
| VAH 202 | Survey of Art II | 3 |
| VAH 203 | Survey of Art III | 3 |
| VAH 350 | Western Architecture | 3 |


| VAH 360 | Art History \& Feminism | 3 |
| :---: | :---: | :---: |
| VAH 370 | Nineteenth Century Art I | 3 |
| VAH 382 | History of Photography II | 3 |
| VAH 383 | History of Graphic Desing | 3 |
| VAP 101 | Foundation Photography | 3 |
| VAP 201 | Photography II | 3 |
| VAR 210 | Visual Journal | 3 |
| VAR 220 | Visual Resources | 3 |
| ${ }^{3}$ Contextual courses may be General Education approved and used to satisfy Cluster and/or major or minor requirements. The contextual courses are as follows for each of the matching languages: |  |  |
| Arabic (ARA) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| HST 333 | Modern Middle East | 3 |
| HST 334 | History of the Palestinian-Isreali Conflict | 3 |
| HST 354 | History of Women \& Gender in the Middle East | 3 |
| HST 356 | Comparative History of Women in the Third World | 3 |
| HST 493 | Seminar in Middle Eastern History | 3 |
| PHL 351 | Medieval Philosophy | 3 |
| Chinese (CHI) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| ENG 341 | Asian-American Literature | 3 |
| HST 330 | History of East Asia to 1800 | 3 |
| HST 332 | Modern Germany | 3 |
| PHL 355 | Asian Philosophy | 3 |
| French (FRN) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| ENG 353 | Literature of the Renaissance | 3 |
| ENG 407 | Medieval English Literature | 3 |
| HST 383 | History of the Caribbean | 3 |
| POL 320 | Comparative Politics: Western Europe | 3 |
| THR 415 | History of the Theatre I | 3 |
| THR 425 | History of Theatre II | 3 |
| German (GER) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| POL 320 | Comparative Politics: Western Europe | 3 |
| THR 415 | History of the Theatre I | 3 |
| THR 425 | History of Theatre II | 3 |
| Hindi (HND) |  |  |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| HST 356 | Comparative History of Women in the Third World | 3 |


| THR 415 | History of the Theatre I | 3 |
| :--- | :--- | :--- |
| Italian (ITA) |  | 3 |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| ENG 353 | Literature of the Renaissance | 3 |
| THR 415 | History of the Theatre I | 3 |
| VAH 450 | Italian Renaissance Art |  |
| Latin (LAT) |  | 3 |
| HST 220 | Survey of Ancient History | 3 |
| HST 303 | History of the Roman Republic \& Empire | 3 |
| PHL 351 | Medieval Philosophy | 3 |
| THR 415 | History of the Theatre I | 3 |
| THR 425 | History of Theatre II |  |
| Russian (RUS) |  | 3 |
| ANT 315 | Language \& Culture | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| HST 326 | Russia, The Soviet Union \& Beyond 1860-Present | 3 |
| POL 321 | Comparative Politics: Russia \& the New States | 3 |
| Spanish (SPN) |  |  |
| ANT 315 | Language \& Culture | 3 |
| ANT 352 | Cultures of Latin America | 3 |
| CMS 316 | Intercultural Communication | 3 |
| CMS 414 | Global Communication | 3 |
| ENG 360 | US Latina/Latino Literature | 3 |
| HST 357 | Latin America in the Twentieth Century | 3 |
| HST 358 | Social \& Cultural History of Latin America | 3 |
| HST 382 | History of Mexico | 3 |
| HST 383 | History of the Caribbean | 3 |
| HST 384 | Economic History of Latin America | 3 |
| SOC 368 | Immigration \& Immigrants | 3 |

## Summary of Requirements for the B.A.

| Major | $30-45$ |
| :--- | :---: |
| Liberal Studies Curriculum ${ }^{1}$ |  |
| Philosophy and Religious Studies | 6 |
| History | 3 |
| Literature | 3 |
| Creative and Performing Arts | $0-11$ |
| L2 Proficiency (Proficiency in a language other than English) | 12 |
| Social Sciences | 3 |
| Mathematics | 11 |
| Natural Sciences | $3-9$ |
| English Composition and Oral Communication | $0-1$ |
| Introduction to the University |  |
| Electives to total 124 hours |  |

1 For specifics of the requirement, please refer to the Catalog section: College of Arts and Sciences - General Requirements for all Bachelor of Arts Programs.

## General Requirements for all Bachelor of Science Programs

A minimum of 120 semester hours of approved coursework must be presented for the B.S. For limitations on credit and restrictions on courses, consult the chairperson or the dean. For departmental or program requirements, consult program schedules or the department chairperson or program director.

Major Concentration (with at least 24 semester hours at 300-400 level).
Breadth Requirement (See Distribution Table below.)
Program Requirements and General Electives: Electives should be approved by the chairperson or dean since some restrictions exist. Common Academic Program (CAP): These courses may also be counted for other requirements where applicable including Major Concentration, Breadth Requirement, Program Requirements and General Electives

## Distribution Table for Breadth Requirements

Courses taken to fulfill the breadth requirement should be external to the major concentration. Students electing courses in any department should be aware that some introductory or background knowledge may be expected of them even when no specific prerequisite course is listed.

Natural Sciences: Selected from Biology, Chemistry, Geology, and
Physics courses with accompanying laboratories. (Includes 7 hours CAP Natural Science.)
Mathematics, Computer Science: At least 3 semester hours must be in Mathematics, the course(s) to be determined by placement and major program. (Includes 3 hours of CAP Mathematics and College of Arts and Sciences Mathematics Competency.)
Social and Behavioral Sciences: Anthropology, Economics, Political Science, Psychology, Sociology. Up to 3 of the 6 semester hours of social and behavioral sciences may, with the approval of the chairperson of the major department or the director of the program, be taken in applied social and professional studies: Criminal Justice Studies, Education, Management, Marketing, Military Science, Social Work, and appropriate courses in ASI, AMS, and CMS. (Includes 3 hours CAP Social Science.)
Humanities: American Studies, Communication, English, History, Humanities Studies, Languages, Music, Philosophy, Religious Studies, Visual Arts, and, with the approval of the chairperson of the major department or director of the program, appropriate courses in ASI. (The CAP First-Year Humanities Commons, SecondYear Writing, and Oral Communication courses do not fulfill this requirement.)
Philosophy and Religious Studies 12
College of Arts and Sciences' Composition and Oral Communication 3-9 Competencies: Each student should demonstrate competence in composition, and oral communication. This competence may be demonstrated through coursework, or advanced standing. Please refer to the Catalog section: College of Arts and Sciences - Degree Requirements.

## Degree Requirements

1. To be awarded the bachelor's degree by the College of Arts and Sciences, it is necessary to complete all the requirements listed for one of the academic programs offered by the College.
2. A maximum of four semester hours of general activities courses, a maximum of two semester hours of physical education activities courses, a maximum of ten semester hours of MIL courses, and a maximum of six hours of applied courses may be counted in the semester hours required for the degree. In addition, a maximum of one semester hour from ASI 150, VAR 100, or an equivalent course may be counted in the semester hours required for the degree.

placed in ENG 100A and ENG 100B

- they are in the CORE program (ASI 120 counts as ENG 200H)


## Oral Communication Competencies

The College of Arts and Sciences' oral communication competency requirements are satisfied by completing the University's Common Academic Program requirement of CMM 100 Principles of Oral Communication, and with a grade of C - or higher.

## Mathematics Competencies

In order to graduate, students are required to satisfy the Common Academic Program Mathematics requirement. The College of Arts and Sciences requires a grade of C- or better, or earn EM credit based on

AP examinations for MTH 168 Anly Geom \& Calc or MTH 207 Intro to Statistics, or earn appropriate transfer credit, for any one of the Common Academic Program mathematics courses.

| MTH 114 | Contemporary Math | 3 |
| :--- | :--- | :--- |
| MTH 129 | Calculus for Business | 3 |
| MTH 137 | Calculus I with Review | 4 |
| MTH 148 | Introductory Calculus I | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 205 | Mathematical Concepts II | 3 |
| MTH 207 | Introduction to Statistics | 3 |

6. It is the responsibility of the student to file his or her Candidate for Graduation form.

## L2 Entrance Requirement

Any student admitted to the College of Arts and Sciences must have had two years of high school study of a language other than English (L2) or make up the deficit at the University. The deficit may be made up by successful completion of one of the following courses or the equivalent:

| ARA 141 | Basic Proficiency in Arabic II | 4 |
| :--- | :--- | :--- |
| CHI 141 | Basic Proficiency in Mandarin Chinese II | 4 |
| FRN 141 | Basic Proficiency in French II | 4 |
| GER 141 | Basic Proficiency in German II | 4 |
| ITA 141 | Basic Proficiency in Italian | 4 |
| LAT 141 | Basic Proficiency in Latin II | 4 |
| RUS 141 | Basic Proficiency in Russian II | 4 |
| SPN 141 | Basic Proficiency in Spanish II | 4 |

## Proficiency in L2

The College of Arts and Sciences strongly encourages its students to acquire the highest level of L2 proficiency. Students may show proficiency by demonstration of basic practical communicative competence in a language other than English. Proficiency for modern languages includes the following four skills:

- Speaking: Ability to handle successfully a limited number of interactive, task-oriented, and social situations. Can ask and answer questions, initiate and respond to simple statements, and maintain face-to-face conversation, although with hesitancy and linguistic inaccuracies. Speech is generally understood by native speakers used to interacting with language learners.
- Writing: Ability to write simple messages and descriptions on familiar topics, to provide biographical information, and to express interests and preferences by recombining learned vocabulary and structures. Some effort may be required from native speakers to understand the written messages.
- Listening: Comprehension of main idea and some supporting detail in passages of up to 250 words of everyday speech on familiar topics in a context that provides significant support for the message.
- Reading: Comprehension of main idea and supporting detail in contextualized written passages of up to 600 words in which a generally familiar, everyday topic is discussed.

Students entering the University have the opportunity to demonstrate the defined levels of proficiency by passing a University placement/ proficiency examination. Any student who has not achieved proficiency
as determined by this examination upon entry can choose from the following options to reach proficiency:

- course work at the University of Dayton
- course work elsewhere
- an individual study program
- study abroad
- an immersion experience

The Department of Languages offers the following possible sequences of language courses:

- Basic Proficiency

For students who have never studied the language previously or who demonstrate no functional ability: 101-141 ( 8 sem. hrs.) in Arabic, Chinese, French, German, Italian, Latin, Russian and Spanish.

- Accelerated sequence

For students with previous language study or experience who demonstrate some functional ability on the placement/proficiency examination: 131-141 ( 6 sem. hrs.) available in French, German, Latin and Spanish.

- Capstone course (201)

For students with significant language study or experience: (4 sem. hrs.) available in all languages.

Students choosing to complete the Liberal Studies Curriculum using Latin as their language will be required to demonstrate proficiency in reading and translation only.

Students whose first language is not English demonstrate L2 proficiency by satisfying the University Common Academic Program requirements in composition and oral communication.

## Internship Program

The Internship Program is an educational work experience with an outside agency, in which a full-time student registers for on-the-job work performed without direct supervision by academic personnel. Such work can be performed in a variety of areas; however, the general purpose of all internships is to serve as transition between the world of study and the world of work.

Normally a departmental internship director or another designated faculty member will make all contacts with prospective agencies for placing students as interns. While students themselves may initiate contacts at possible sites, all sites must be ruled acceptable by the director before an internship may begin.

In order to accomplish the general purpose of an internship, the student must adhere to the following requirements:

- To be eligible for an internship, a student must be in good standing at the University of Dayton and have successfully completed course work in areas appropriate to the internship sought.
- An intern may receive no more than six semester hours of credit in any semester for internship.
- No more than twelve semester hours of work experience credit in any kind of internship or work experience program can be accepted toward a baccalaureate degree.
- The student intern will submit a daily log and a written report to the internship director at the conclusion of the internship.

Other procedures and requirements in addition to those mandated by the College may be imposed by departments for individual programs to meet the specific nature of a given internship.

Interested students should see the internship directors in their respective departments for further details.

## Mini-Courses

Mini-courses are special, short-term, interdisciplinary credit courses developed by University faculty, (or sometimes by students with the advice and consent of a faculty member), to meet specific, highly current needs or interests not covered in the regular curricula. They are free of charge to all full-time students, even if the course puts them over the full-time limit, and are open to part-time and non-UD students for credit or audit. The typical mini-course carries one semester hour of credit, or fifteen class hours. Classes can be in various sequences, extending over several weeks or concentrated within a few days. Some mini-courses take the form of workshops. Occurring at various times in the year, mini-courses are publicized throughout campus. They can be added to students schedules during the term. For a sample listing of mini-courses, click here (p. 58).

## Special Programs and Continuing Education

To serve adults in the Dayton community, the University provides a variety of noncredit courses, many in the form of workshops, seminars, study tours, and conferences. These are planned to meet the educational and training needs of organizations and of the community and are held both on and off campus. This office also administers Elderhostel, OSHER Lifelong Learning Institute, Senior Fellows, and New Horizons Band, for persons fifty and over. Continuing Education Units (CEU) are awarded for a charge for some offerings.

## Teacher Licensure for Students in Bachelor of Arts and Bachelor of Science

B.A. or B.S. with Teacher Licensure

Students in the College of Arts and Sciences may be able to complete the requirements for a teaching license without transferring to the School of Education and Health Sciences. For additional information regarding this option consult the Dean's office in the College of Arts and Sciences.

Enrollment, continuation, and successful completion in this program are subject to the same admission requirements, advising, maintenance of a unified system of records, screening, and other professional expectations of students in the School of Education and Health Sciences working toward the B.S. in Education and Allied Professions.

In order to complete all requirements in four years, a student in the College of Arts and Sciences should process an application for admission to the appropriate licensure program during the second semester of enrollment to begin the professional education sequence. Screening will be completed by the SOEHS transfer official. The requirements for the College of Arts and Sciences, the School of Education and Health Sciences, and licensure program concentration courses must be completed in order to be eligible for licensure recommendation. It is
possible for students to earn dual degrees in the College of Arts and Sciences and School of Education and Health Sciences.

## Programs of Study

To learn more about the available programs in the College of Arts and Sciences, explore the departments:

- Africana Studies (p. 117)
- Air Force Aerospace Studies ROTC (p. 118)
- American Studies (p. 119)
- Arts Administration (p. 123)
- Biology (p. 124)
- Chemistry (p. 134)
- Communication (p. 142)
- Computer Science (p. 147)
- Criminal Justice Studies (p. 151)
- Economics (p. 155)
- English (p. 158)
- Family Development (p. 164)
- Film Studies (p. 165)
- General Studies (p. 165)
- Geology (p. 166)
- Global Languages and Cultures (p. 171)
- History (p. 182)
- International Studies (p. 188)
- Marianist Social Transformation (p. 194)
- Mathematics (p. 195)
- Military Science ROTC (p. 202)
- Music (p. 203)
- Philosophy (p. 222)
- Physics (p. 228)
- Political Science (p. 233)
- Prelaw (p. 239)
- Premedicine/ Predentistry (p. 240)
- Psychology (p. 243)
- Religious Studies (p. 247)
- Sociology, Anthropology, and Social Work (p. 253)
- Sustainability, Energy, and Environment (p. 259)
- Theatre (p. 260)
- Visual Arts (p. 263)
- Women's and Gender Studies (p. 276)


## Africana Studies

The Africana studies minor offers an interdisciplinary approach to the study of the peoples of Africa and African descendants in the Americas, Africa and throughout the Diaspora. Through its courses, the minor encourages service at the local, national, and international level. The minor prepares distinctive graduates to develop and use analytical skills and approaches to understand historical and contemporary issues associated with the experience of Africans and African descendants. The minor is interdisciplinary and structured to incorporate teaching and
research methodologies and materials from disciplines in the College of Arts and Sciences and other schools throughout the University.

The Africana studies minor requires 15 semester hours. It must include one approved "Special Topics" or "Independent Study" course from an appropriate discipline and 12 semester hours in upper division courses (300-level or above) from a minimum of three different disciplines.

## Africana Studies Committee

Julius A. Amin (History), Coordinator
Cox (Music), Kebede (Philosophy), Randall (Law)

## Minor in Africana Studies (AFS)

## Africana Studies

| Select four courses from at least three different disciplines: |  |
| :---: | :---: |
| EDT 340 <br> (p. 117) | Educating Diverse Student Populations in Inclusive Settings |
| ENG 335 <br> (p. 117) | African Amer Lit |
| $\begin{aligned} & \text { HST } 336 \\ & \text { (p. 117) } \end{aligned}$ | Hst-Africa 19th Cn |
| $\begin{aligned} & \text { HST } 337 \\ & \text { (p. 117) } \end{aligned}$ | Hst Afr-19th Cn-Pr |
| HST 383 <br> (p. 117) | Hst of Caribbean |
| HST 385 <br> (p. 117) | Atlantic World |
| HST 398 <br> (p. 117) | Hs Blks-US 1526-1900 |
| HST 399 <br> (p. 117) | Hst Blks-US s/1900 |
| HST 488 <br> (p. 117) | Sem in African Hst |
| MUS 305 <br> (p. 117) | Africn Amer Sac Mus |
| MUS 306 <br> (p. 117) | History-Amer Jazz |
| MUS 390 <br> (p. 117) | Ensembles |
| PHL 363 <br> (p. 117) | African Philosophy |
| $\begin{aligned} & \text { PHL } 364 \\ & (\text { p. 117) } \end{aligned}$ | Race, Gender\&Phl |
| $\begin{aligned} & \text { REL } 329 \\ & \text { (p. 117) } \end{aligned}$ | African Amer Rel |
| $\begin{aligned} & \text { SOC } 328 \\ & \text { (p. 117) } \end{aligned}$ | Racial\&Eth Minorties |

Select one special topics course from:
MUS 360 Special Topics-Music
(p. 117)

REL 492
Special Topics
(p. 117)

VAH 490 Special Problems
(p. 117)

Special topics or independent studies course approved by committee

Total Hours

## Air Force Aerospace Studies, ROTC (AES)

As a University of Dayton student, you have the opportunity to become an Air Force officer through a cooperative agreement with Wright State University's Department of Aerospace Studies. We offer the Air Force Reserve Officer Training Corps (ROTC) program to full-time University of Dayton students pursuing a baccalaureate degree. While all courses are taken through the University of Dayton, leadership laboratories and classes for junior and senior years are typically taught at Wright State University, the host site of the area Air Force ROTC detachment.

The Air Force ROTC program is designed to produce Air Force officers who will be successful leaders and managers. All officers will be placed in positions of responsibility, facing challenging and rewarding career opportunities while using the most advanced technology in the world.

The Air Force ROTC program is organized in two portions: the General Military Course (GMC), typically taken during freshman and sophomore years, and the Professional Officer Course (POC), usually taken during junior and senior years or during the last two years prior to graduation. At a minimum, officers will need to complete the POC portion of the program.

- The GMC is a no-obligation introduction to the Air Force. The course covers the development and history of air power and the organization of the contemporary United States Air Force.
- The POC curriculum covers communicative skills, Air Force management and leadership, American defense policy, and regional world studies. Air Force ROTC students have additional opportunities to participate in challenging and rewarding activities that include piloting a sail-plane, trips to air force bases, orientation flights, official military functions and ceremonies, and one on-one mentoring with an active duty Air Force officer.

This program is open to all majors. All Air Force ROTC students have the opportunity to apply for scholarships that pay partial or full tuition, books, and charges, plus a \$300-\$500 monthly stipend depending on your progress in the program. These scholarships are available on a competitive basis to students who demonstrate academic and leadership potential. Scholarships with the greatest availability are in the areas of engineering, mathematics, computer science, and physics. High school students should apply for a scholarship no later than December 1st of their senior year. Apply at http://www.afrotc.com/. In-college students will apply for scholarships through their Air Force ROTC instructor. If you are a freshman or sophomore seeking a challenge or wish to give Air Force ROTC a trial run, sign up for the Aerospace Studies 121 course.

All other students should contact:
The Department of Aerospace Studies
Wright State University
Dayton, Ohio 45435
Phone: 937-775-2730
Email: afrotc@wright.edu
Website: http://www.wright.edu/academics/prog/rotc/

The University of Dayton Admissions Office
Phone: 1-937-229-1000
E-mail: info@udayton.edu

## Courses

AES 120. General Military Course (GMC), Leadership Laboratory. 0 Hours
Applied Air Force Reserve Officer Training Corps (AFROTC) training. This lab provides an opportunity for students to apply Air Force procedures, techniques, and knowledge. Students will learn the Air Force organizational structure as well as customs and courtesies. GMC cadets will also develop their followership and teamwork skills in a cadet led, cadre supervised Lab environment. Requires participation in two weekly physical training sessions. Taken concurrently with 100 -level AES courses. (Pass/Fail).
AES 121. Foundations of the United States Air Force I. 1 Hour This is a survey course designed to introduce students to the United States Air Force and provide an overview of the basic characteristics, missions, and organization of the Air Force. Corequisite(s): AES 120.

AES 122. Foundations of the United States Air Force II. 1 Hour This is a continuation of AES 121. It is a survey course designed to introduce students to the United States Air Force and provide an overview of the basic characteristics, missions, and organization of the Air Force. Corequisite(s): AES 120.
AES 220. Field Training Preparation (FTP) Leadership Laboratory. 0 Hours
Applied Air Force Reserve Officer Training Corps (AFROTC) training. This lab further develops skills and concepts introduced in the General Military Course Leadership Laboratory. Students are prepared mentally and physically for the demanding requirements of upcoming Field Training summer program. Training is cadet led where students will display their ability to apply Air Force concepts and procedures. Requires participation in two weekly physical training sessions. Taken concurrently with 200-level AES courses. (Pass/Fail).
AES 221. Evolution of USAF Air and Space Power I. 1 Hour This course features topics on Air Force heritage and leaders; introduction to air and space power through examination of distinctive capabilities and functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air and space power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Corequisite(s): AES 220.
AES 222. Evolution of USAF Air and Space Power II. 1 Hour This course is a continuation of AES 221 and features topics on Air Force heritage and leaders; introduction to air and space power through examination of distinctive capabilities and functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air and space power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Corequisite(s): AES 220.
AES 250. Independent Study. 1-3 Hours
Independent Study.
AES 270. Extended GMC Leadership Laboratory. 0 Hours
Extended GMC Leadership Laboratory.
AES 322. Air Force Leadership Studies I. 3 Hours
Air Force Leadership Studies.

AES 330. Intermediate Cadet Leadership (ICL) Laboratory: Applied Air Force ROTC Training. 0 Hours
The ICL lab builds the foundation of leadership skills required as an Air Force Officer. Cadets apply leadership/management concepts learned in Field Training and previous aerospace studies classes and labs to assist in training the General Military Course cadets. Requires participation in two weekly physical training sessions. Taken concurrently with 300-level AES courses. (Pass/Fail).
AES 331. United States Air Force Leadership Studies I. 3 Hours This course teaches cadets advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as juniors and seniors. Prerequisite(s): AES 330.
AES 332. United States Air Force Leadership Studies II. 3 Hours Air Force Leadership Studies.
AES 430. Senior Cadet Leadership (SCL) Laboratory: Applied Air Force ROTC Training. 0 Hours
This lab prepares students for progression into active duty life. As in the Intermediate Cadet Leadership Lab, students take leadership roles in execution of leadership labs for the cadet wing. Students hone leadership fundamentals learned in previous courses and labs to a level commensurate to entry into the active duty Air Force. Requires participation in two weekly physical training sessions. Taken concurrently with 400-level AES courses. (Pass/Fail).
AES 431. National Security Affairs/Preparation for Active Duty I. 3 Hours
This course is designed to give college seniors the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Corequisite(s): AES 430.

AES 432. National Security Affairs/Preparation for Active Duty II. 3

## Hours

This course is a continuation of AES 431 and is designed to give college seniors the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Corequisite(s): AES 430.

AES 440. Senior Cadet Leadership (SCL) Applied Air Force Training. 0 Hours
Applied Air Force Training.
AES 470. Extended POC Leadership Laboratory. 0 Hours
POC Leadership Laboratory.
AES 491. Independent Study. 1 Hour
Independent Study.
AES 493. Independent Study. 3 Hours
Independent Study.

## American Studies

## - Bachelor of Arts, American Studies (p. 120)

In this interdisciplinary program, students take courses in their choice of eleven fields, thereby learning the skills of integrating, coordinating and making connections. The program, one of over three hundred
nationwide, is most appropriate for those whose interests encompass several traditional majors.

## American Studies Committee

Donald L. Pair (Office of the Dean), Interim Program Director

## Bachelor of Arts with a Major in American Studies (AMS) Minimum 124 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3
$\begin{array}{rrr}\text { CMM } 100 & \text { Principles of Oral Communication } & 3\end{array}$
Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |


| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variable |
| Advanced Study | credit |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

| Liberal Studies Curriculum |  |
| :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) | 3 |
| L2 Proficiency (Proficiency in a language other than English) | 0-11 |
| Literature (May include CAP Components) | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) | 3 |
| Natural Sciences (Satisfies CAP Natural Science) | 11 |
| Social Sciences (Includes CAP Social Science) | 12 |
| Major Requirements | 48 |
| AMS $300 \quad$ American Cultures (Satifies CAP Inquiry) (p. 119) | 3 |
| AMS $301 \quad$ Interps of Amer Cult (p. 119) | 3 |


| AMS 400 | Interdisc Research (Satisfies CAP Major | 3 |
| :--- | :--- | :--- |
| (p. 119) | Capstone) |  |

First Area Courses:
Select five courses from either group A, B, or C 15
Select three supporting courses from the elected discipline 9
Second Area Courses:
Select three courses from one of the two remaining groups 9
Third Area Courses:
Select two courses from the remaining group 6

## Groups:

## Group A

(May include CAP Arts)
ENG 305 Survey-American Lit
(p. 119)

ENG $317 \quad$ Contemporary Poetry ${ }^{1}$
(p. 119)

ENG $319 \quad$ Contemporary Fiction ${ }^{1}$
(p. 119)

ENG $320 \quad$ Contemporary Drama ${ }^{1}$
(p. 119)

ENG 325 Science Fiction
(p. 119)

ENG 327 Studies-Populr Fictn
(p. 119)

ENG 329
(p. 119)

ENG $331 \quad$ Studies in Film ${ }^{1}$
(p. 119)

ENG $332 \quad$ Studies-Lit \& Film ${ }^{1}$
(p. 119)

ENG 335 African Amer Lit
(p. 119)

ENG 337
Studies-Folklore
(p. 119)

ENG 339 American Indian Lit
(p. 119)

ENG $380 \quad$ Studies in Lit ${ }^{1}$
(p. 119)

ENG $383 \quad$ Tragic Dilemma ${ }^{1}$
(p. 119)

ENG 451 American Romanticism
(p. 119)

ENG 453 Amer Realism\&Natrlsm
(p. 119)

ENG 455 20th Centruy Amer Lit
(p. 119)

ENG 468 Intro to Linguistics
(p. 119)

ENG $490 \quad$ Seminar ${ }^{1}$
(p. 119)

MUS $304 \quad$ History of American Music
(p. 119)

MUS 305 Africn Amer Sac Mus
(p. 119)

MUS 306 History-Amer Jazz
(p. 119)

| MUS 307 <br> (p. 119) | Dev Amer Poplr Song | HST 377 <br> (p. 119) | Contemprary Amer Hst |
| :---: | :---: | :---: | :---: |
| MUS 327 <br> (p. 119) | Music in Film | HST 378 <br> (p. 119) | Hst Globl Immgnts-US |
| MUS 328 <br> (p. 119) | Hst-Amer Musical | HST 380 <br> (p. 119) | Native Amer History |
| MUS 404 <br> (p. 119) | 20hth Century Music ${ }^{1}$ | HST 385 <br> (p. 119) | Atlantic World |
| VAH 370 <br> (p. 119) | American Art | HST 391 <br> (p. 119) | Amr Arch Hst\&Prsrvtn |
| VAH 480 <br> (p. 119) | 20th Century Art I | HST 398 <br> (p. 119) | Hs Blks-US 1526-1900 |
| VAH 482 <br> (p. 119) | Hst-Photogrphy II | HST 399 <br> (p. 119) | Hst Blks-US s/1900 |
| VAH 483 <br> (p. 119) | 20th Century Art II | HST 490 <br> (p. 119) | Sem in Hstrgrphy |
| VAH 490 <br> (p. 119) | Special Problems ${ }^{1}$ | HST 495 <br> (p. 119) | Internship |
| Group B |  | $\begin{aligned} & \text { HST } 499 \\ & \text { (p. 119) } \end{aligned}$ | Topics in History ${ }^{1}$ |
| (May include CAP Advanced Study in History, Philosophy and Religious Studies) |  | $\text { PHL } 307$ <br> (p. 119) | Philosophy and Women |
| $\begin{aligned} & \text { HST } 342 \\ & \text { (p. 119) } \end{aligned}$ | Environ Hst Americas |  |  |
| $\begin{aligned} & \text { HST } 344 \\ & \text { (p. 119) } \end{aligned}$ | Hst-Sci,Tch\&Mod Crp | $\begin{aligned} & \text { PHL } 310 \\ & \text { (p. 119) } \end{aligned}$ | Social Philosophy |
| HST 346 | Hist of Aviation | PHL 311 <br> (p. 119) | Phl of Religion |
| (p. 119) |  | $\text { PHL } 314$ <br> (p. 119) | Philosophy of Law |
| $\begin{aligned} & \text { HST } 347 \\ & \text { (p. 119) } \end{aligned}$ | Sex,Race \& Sicence |  | Ethics\&Modern War |
| HST 351 | Women Gender Am | PHL 317 <br> (p. 119) |  |
| (p. 119) |  | $\text { PHL } 318$ <br> (p. 119) | Family Ethics |
| $\begin{aligned} & \text { HST } 352 \\ & \text { (p. 119) } \end{aligned}$ | Hst of Amer Family |  | Philosophy of Art |
| HST 355 | American Urban Hist | $\begin{aligned} & \text { PHL } 320 \\ & \text { (p. 119) } \end{aligned}$ |  |
| (p. 119) |  | $\text { PHL } 323$ <br> (p. 119) | Phl \& Literature |
| $\begin{aligned} & \text { HST } 360 \\ & \text { (p. 119) } \end{aligned}$ | US Legl/Const Hst I |  |  |
| HST 361 | US Legl/Const Hst II | $\begin{aligned} & \text { PHL } 331 \\ & \text { (p. 119) } \end{aligned}$ | Sci, Objitty \& Values |
| (p. 119) |  | $\begin{aligned} & \text { PHL } 332 \\ & \text { (p. 119) } \end{aligned}$ | Technology\&Values |
| $\begin{aligned} & \text { HST } 365 \\ & \text { (p. 119) } \end{aligned}$ | Amer Films as Hst | $\begin{aligned} & \text { PHL } 340 \\ & \text { (p. 119) } \end{aligned}$ | Special Problems ${ }^{1}$ |
| HST 369 | Civil War \& Recnstr |  |  |
| (p. 119) |  | $\text { PHL } 361$ <br> (p. 119) | American Philosophy |
| $\begin{aligned} & \text { HST } 370 \\ & \text { (p. 119) } \end{aligned}$ | Eco \& Bus Hst-US | $\begin{aligned} & \text { REL } 326 \\ & \text { (p. 119) } \end{aligned}$ | Protestant Christnty |
| HST 372 | Hst-Rel in US |  |  |
| (p. 119) |  | $\begin{aligned} & \text { REL } 327 \\ & \text { (p. 119) } \end{aligned}$ | US Religious Expr |
| $\begin{aligned} & \text { HST } 373 \\ & \text { (p. 119) } \end{aligned}$ | American Mil Hst | REL 328 <br> (p. 119) |  |
| HST 374 | Ireland \& America |  | US Cath Experience |
| (p. 119) |  | $\begin{aligned} & \text { REL } 364 \\ & \text { (p. 119) } \end{aligned}$ | Current Moral Issues |
| $\begin{aligned} & \text { HST } 375 \\ & \text { (p. 119) } \end{aligned}$ | US Foreign Relations | $\begin{aligned} & \text { (p. 119) } \\ & \text { REL } 367 \end{aligned}$ | Chr Ethics\&HIth Care |
| $\begin{aligned} & \text { HST } 376 \\ & \text { (p. 119) } \end{aligned}$ | Soc \& Cult Hst of US | $\begin{aligned} & \text { REL } 372 \\ & \text { (p. 119) } \end{aligned}$ | Religion \& Film |


| $\begin{aligned} & \text { REL } 373 \\ & \text { (p. 119) } \end{aligned}$ | Religion\&Literature | $\begin{aligned} & \text { POL } 360 \\ & \text { (p. 119) } \end{aligned}$ | Urban Politics |  |
| :---: | :---: | :---: | :---: | :---: |
| REL 375 <br> (p. 119) | Religion \& Science,Religion and Science | POL 408 <br> (p. 119) | Amer Foreign Policy |  |
| REL 376 <br> (p. 119) | Theol\&Soc Sciences | POL 411 <br> (p. 119) | Constitutional Law |  |
| REL 485 <br> (p. 119) | Lay Ministry | $\text { POL } 413$ <br> (p. 119) | Poltcs-Bureau\&Regln |  |
| Group C |  | $\text { POL } 450$ | Civil Liberties |  |
| (May inclu | P Components) | (p. 119) |  |  |
| ANT 315 <br> (p. 119) | Language and Culture | PSY 334 <br> (p. 119) | Industrial Psycholgy |  |
| ANT 335 <br> (p. 119) | Urban Anthropology | $\begin{aligned} & \text { PSY } 341 \\ & \text { (p. 119) } \end{aligned}$ | Social Psychology |  |
| ANT 449 <br> (p. 119) | Anthrop Field Work | $\begin{aligned} & \text { PSY } 351 \\ & \text { (p. 119) } \end{aligned}$ | Child Psychology |  |
| $\begin{aligned} & \text { ECO } 346 \\ & \text { (p. 119) } \end{aligned}$ | Intrmd MicroEco Anly | $\begin{aligned} & \text { PSY } 361 \\ & \text { (p. 119) } \end{aligned}$ | Personality |  |
| $\begin{aligned} & \text { ECO } 347 \\ & \text { (p. 119) } \end{aligned}$ | Intrmd MacroEco Anly | $\begin{aligned} & \text { PSY } 363 \\ & \text { (p. 119) } \end{aligned}$ | Abnormal Psychology |  |
| $\begin{aligned} & \text { ECO } 390 \\ & \text { (p. 119) } \end{aligned}$ | Antitrust Economics | $\begin{aligned} & \text { PSY } 443 \\ & \text { (p. 119) } \end{aligned}$ | Psychology of Women |  |
| $\begin{aligned} & \text { ECO } 435 \\ & \text { (p. 119) } \end{aligned}$ | Eco of Environmnt | $\begin{aligned} & \text { PSY } 461 \\ & \text { (p. 119) } \end{aligned}$ | Curr Impl-Drug Depnd |  |
| $\begin{aligned} & \text { ECO } 441 \\ & \text { (p. 119) } \end{aligned}$ | Econometrics | $\begin{aligned} & \text { PSY } 462 \\ & \text { (p. 119) } \end{aligned}$ | Human Sexuality |  |
| $\begin{aligned} & \text { ECO } 442 \\ & (\text { p. 119) } \end{aligned}$ | Money and Banking | $\begin{aligned} & \text { PSY } 471 \\ & \text { (p. 119) } \end{aligned}$ | Hst of Psychology |  |
| $\begin{aligned} & \text { ECO } 445 \\ & \text { (p. 119) } \end{aligned}$ | Public Finance | $\begin{aligned} & \text { SOC } 321 \\ & (p .119) \end{aligned}$ | Soc of Work\&Occuptns |  |
| $\begin{aligned} & \text { ECO } 460 \\ & \text { (p. 119) } \end{aligned}$ | Eco Develop \& Growth | $\begin{aligned} & \text { SOC } 328 \\ & \text { (p. 119) } \end{aligned}$ | Racial\&Eth Minorties |  |
| $\begin{aligned} & \text { ECO } 461 \\ & \text { (p. 119) } \end{aligned}$ | International Econ | $\begin{aligned} & \text { SOC } 337 \\ & (p .119) \end{aligned}$ | Political Sociology |  |
| $\begin{aligned} & \text { ECO } 471 \\ & \text { (p. 119) } \end{aligned}$ | Labor Economics | $\begin{aligned} & \text { SOC } 339 \\ & (p .119) \end{aligned}$ | Social Inequality |  |
| $\begin{aligned} & \text { ECO } 485 \\ & (\text { p. 119) } \end{aligned}$ | Urban\&Regional Econ | $\begin{aligned} & \text { SOC } 341 \\ & \text { (p. 119) } \end{aligned}$ | Self \& Society |  |
| $\begin{aligned} & \text { POL } 301 \\ & \text { (p. 119) } \end{aligned}$ | Amer Judicl Process | $\begin{aligned} & \text { SOC } 343 \\ & \text { (p. 119) } \end{aligned}$ | Mass Comm-Mdrn Socty |  |
| $\begin{aligned} & \text { POL } 303 \\ & \text { (p. 119) } \end{aligned}$ | State \& Local Govt | $\begin{aligned} & \text { SOC } 351 \\ & (p .119) \end{aligned}$ | Urban Sociology |  |
| $\text { POL } 310$ <br> (p. 119) | Pol Prts, Cmpns\&Eltns | $\begin{aligned} & \text { SOC } 352 \\ & (p .119) \end{aligned}$ | Community |  |
| $\begin{aligned} & \text { POL } 311 \\ & \text { (p. 119) } \end{aligned}$ | Pub Opin \& Pol Bhvr | $\begin{aligned} & \text { SOC } 435 \\ & \text { (p. 119) } \end{aligned}$ | Soc of Globalization |  |
| $\begin{aligned} & \text { POL } 313 \\ & \text { (p. 119) } \end{aligned}$ | American Presidency | 1 This course can be counted only when the material is appropriate to American Studies. Consult the program director. |  |  |
| $\begin{aligned} & \text { POL } 314 \\ & \text { (p. 119) } \end{aligned}$ | Interest Group Pols | Breadth |  |  |
| $\begin{aligned} & \text { POL } 316 \\ & \text { (p. 119) } \end{aligned}$ | American Pol Thought | ASI 150 <br> (p. 119) | Intr to the Univ Exp | 1 |
| $\begin{aligned} & \text { POL } 335 \\ & \text { (p. 119) } \end{aligned}$ | US Natnl Sec Policy | Total Hours to total at least |  | 124 |
| $\begin{aligned} & \text { POL } 350 \\ & \text { (p. 119) } \end{aligned}$ | Legislative Politics |  |  |  |

## Courses

AMS 300. American Cultures. 3 Hours
Study of American artifacts to discern how they indicate the periods in the life of the civilization and how like artifacts can be used to determine the stages of development of various peoples. (Will not satisfy humanities breadth requirement.).

AMS 301. Interpretations of American Culture. 3 Hours
Critical study of various interpretations of American culture through more than a hundred years.

## AMS 400. Interdisciplinary Research. 3 Hours

Study of the principles of interdisciplinary scholarship; what can and probably cannot be accomplished by it; successful interdisciplinary accomplishments. Students will complete interdisciplinary projects.
AMS 477. Honors Thesis Project. 3 Hours
First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for 3 semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.
AMS 478. Honors Thesis Project. 3 Hours
Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for 3 semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s):
Approved 477; approval of University Honors Program.

## Arts Administration

The minor in Arts Administration provides an introductory background to students with an interest in the management of non-profit arts and community organizations. Eligible students are declared majors or minors in music, theatre, and visual arts, or majors in business. The minor offers two tracks depending on the student's major. It provides Arts students with an introductory foundation in business and economics, and SBA students with further literature and practical study in the arts. Core courses explore special issues and challenges that the art community faces today. The minor integrates classroom study with real-world experiences with area arts organizations. The Arts Administration minor requires nineteen semester hours, including seven semester hours of core interdisciplinary courses.

## Arts Administration Committee

Sharon Gratto (Music), Coordinator
Darrell Anderson (Theatre), Judith Huacuja (Visual Arts), Brian LaDuca (Art Street), Rebecca Wells (School of Business Administration)

## Minor in Arts Administration (AAD)

Arts Administration - Track A (required for visual arts, music and theatre majors and minors)

| AAD 301 | Intro to Arts Admin | 3 |
| :--- | :--- | :--- |


| AAD 498 <br> (p. 123) | Arts Admin Internshp |  |
| :--- | :--- | :---: |
| ACC 200 <br> (p. 123) | Intro to Accounting | $1-3$ |
| ECO 203 <br> (p. 123) | Prin of Microecon | 3 |
| Select two courses from: <br> FIN 301 <br> (p. 123) | Intro to Financial Mgt | 3 |
| MGT 201 <br> (p. 123) | Legal Envirnmt-Bus | 6 |
| MKT 300 <br> (p. 123) <br> OPS 300 <br> (p. 123) | Survey of MKT |  |
| Total Hours | Intro-Oper\&Supply Mgt |  |


| Arts Administration - Track B (required for business majors) |  |  |
| :---: | :---: | :---: |
| AAD 301 <br> (p. 123) | Intro to Arts Admin | 3 |
| AAD 498 <br> (p. 123) | Arts Admin Internshp | 1-3 |
| Select three courses from two areas: 9 |  |  |



Select courses from performance or creative arts:
MUS $191 \quad$ Voice Class
(p. 123)

MUS 195 Beg Guitar Class I
(p. 123)

MUS 196 Group Piano I
(p. 123)

| MUS 295 <br> (p. 123) | Beg Guitar Class II |
| :---: | :---: |
| MUS 296 <br> (p. 123) <br> \& MUS 297 <br> (p. 123) | Func Keybd Skls I and Func Keybd Skls II |
| MUS 390 <br> (p. 123) | Ensembles |
| MUS 399 <br> (p. 123) | Performance Studies |
| MUS 491 <br> (p. 123) | University Orchestra |
| MUS 492 <br> (p. 123) | Symphonic Wind Ens |
| MUS 493 <br> (p. 123) | University Chorale |
| THR 100 (p. 123) | Theatre Lab |
| $\begin{aligned} & \text { THR } 201 \\ & \text { (p. 123) } \end{aligned}$ | Basic Dance |
| THR 251 (p. 123) | Beginning Tap Dance |
| $\begin{aligned} & \text { THR } 261 \\ & \text { (p. 123) } \end{aligned}$ | Beginning Jazz Dance |
| THR 271 (p. 123) | Beginning Ballet |
| THR 305 (p. 123) | Theatre Stagecraft |
| $\begin{aligned} & \text { THR } 307 \\ & \text { (p. 123) } \end{aligned}$ | Theatre Lighting |
| THR 310 (p. 123) | Acting I |
| THR 312 <br> (p. 123) | Acting-Film \& TV |
| THR 320 (p. 123) | Stage Mvmt \& Voice |
| $\begin{aligned} & \text { THR } 330 \\ & \text { (p. 123) } \end{aligned}$ | Concepts Scene Desgn |
| VAD 215 <br> (p. 123) | Computr Appl-Desgn |
| VAD 218 <br> (p. 123) | Computr Appl-IIlust |
| VAD 220 <br> (p. 123) | Design Processes I |
| VAF 104 <br> (p. 123) | Foundation Drawing |
| VAF 112 <br> (p. 123) | Foundation 2-D Dsgn |
| VAP 101 <br> (p. 123) | Foundatn Photogrphy |

Total Hours 16-18

[^2]
## Courses

## AAD 301. Introduction to Arts Administration. 3 Hours

Interdisciplinary introduction to the fundamental principles and applications of managing a non-profit arts organization. Study of strategies and tools for effective arts management. Recommended for students with a background in the arts and/or business.

## AAD 498. Arts Administration Internship. 1-3 Hours

Arts administration work experience in an approved organization. Student must be in good academic standing. Students are limited to a maximum of three semester hours. Prerequisite(s): AAD 301; UDI 371; permission of program advisor.

## Biology

Majors:

- Bachelor of Science, Biology (p. 125)
- Bachelor of Science, Environmental Biology (p. 127)

Minor:

- Biology (p. 130)

The Bachelor of Science program in biology is designed to prepare a student for a career in the life sciences. Graduates of the program are competitive for entry into graduate programs in the biological sciences as well as professional schools, such as medical, dental, osteopathic, and veterinary science, as well as physician assistant (PA) and advanced nursing programs.

The department has two primary areas of focus:

1. Basic biomedical science
2. Environmental/ecological science

Biomedical science course offerings includes:

- Molecular biology
- Cell biology
- General and medical microbiology
- Immunology
- Genetics
- Mammalian physiology
- Developmental biology

Environmental/ecological science course offerings include:

- Ecology
- Population biology
- Ecological physiology
- Environmental microbiology
- Community and restoration ecology
- Entomology and analysis of biological data
- Evolutionary biology
- Plant physiology
- Environmental biology in the narrow sense

In addition, advanced undergraduates may enroll in graduate courses for undergraduate credit with the consent of the chairperson. In line with the two areas of research interests, the department encourages students (in consultation with their advisors) to declare one of the two as an
area of concentration of study no later than the end of their sophomore year. For the student more interested in a broad approach to biology, the department recommends a third option, the general biology option (any combination of upper-level biology courses that fulfills the program requirements).

The department offers a research mentorship program for upper-level students majoring in biology. The program allows a student to work closely with both faculty and graduate students in laboratory and/or field research. Participation in the program is based on the recommendation of a member of the faculty. The mentorship program is designed to provide a significant advantage for those students who intend to enter a graduate program.

The department also offers a combined five-year Bachelor and Master of Science (5Y B.S.-M.S.) degree in Biology. This accelerated program is designed for students who display strong potential for research in biology. It provides a liberal arts education, a broad background in biology, the development of expertise in a biological subfield and a thorough introduction to research instrumentation and techniques. Graduates from the program are prepared for either direct entry into the job market or continuation toward the Ph.D. A detailed description of the five-year B.S.M.S. program may be obtained from the departmental office.

A minor in biology consists of twenty semester hours.

## Faculty

Jayne B. Robinson, Chairperson
Distinguished Service Professor: Noland
Professors Emeriti: Chantell, Geiger, Ramsey
Professors: Burky, Kearns, Robinson, Rowe, Tsonis, P. Williams
Associate Professors: Friese, Krane, Nielsen, Singh, D. Wright, S. Wright
Assistant Professors: Benbow, Hansen, Kango-Singh, McEwan,
Pitychoutis, T. Williams
Lecturers: Dillon, Kavanaugh, Klco, Nickell
Adjunct Faculty: Allan, Craver, Del Rio-Tsonis, Fetherson, Hussain, Joseph, Rhoads, Stull, Wolters, Yingling

## Bachelor of Science with a Major in Biology (bio) Minimum 120 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variabl credit |


| Practical Ethical Action |  |
| :--- | ---: |
| Inquiry |  |
| Integrative | variable <br> credit |
| Advanced Study |  |
| Philosophy and/or Religious Studies |  |
| Historical Studies | 3-3 |
| Diversity and Social Justice |  |
| Major Capstone |  |
| Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 | Completed with ENG 200H or ASI 120. |

## Science Breadth Requirements

(Satisfies CAP Mathematics and CAP Natural Science)
CHM 123 General Chemistry 4
(p. 124) and Gen Chemistry Lab
\& 123L (p. 124)
CHM 124 General Chemistry 4
(p. 124) and Gen Chemistry Lab
\& 124L (p. 124)
CHM $313 \quad$ Organic Chemistry 4
(p. 124)
\& 313L (p. 124)
CHM 314 Organic Chemistry 4
(p.124) and Organic Chem Lab
\& 314L (p. 124)
PHY 201 General Physics 4
(p. 124) and General Physics Lab
\& 201L (p. 124)
PHY 202 General Physics 4
(p. 124) and General Physics Lab
\& 202L (p. 124)
Select one mathematics sequence from: 6-8
MTH $116 \quad$ Precalculus Math
(p. 124) and Introductory Calc I
\& MTH 148
(p. 124)

MTH 148 Introductory Calc I
(p. 124) and Introductory Calc II
\& MTH 149
(p. 124)

| MTH 168 | Anly Geom \& Calc I |
| :--- | :--- |
| (p. 124) | and Anly Geom \& Calc II |
| \& MTH 169 |  |
| (p. 124) |  |

Major Requirements ${ }^{\text {1,6 }} 44$
BIO 151 Concepts of Bio I 4
(p. 124) and Concepts-Bio Lab I
\& 151L (p. 124)
BIO 152 Concepts of Bio II
4
(p. 124) and Concepts-Bio Lab II
\& 152L (p. 124)
BIO 299 Biology Seminar
(p. 124)

| $\begin{aligned} & \text { BIO } 310 \\ & \text { (p. 124) } \end{aligned}$ | Ecology | 3 | $\begin{aligned} & \text { BIO } 435 \\ & (\text { p. 124) } \end{aligned}$ | Microbial Ecology and Microbial Ecolgy Lab |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { BIO } 312 \\ & \text { (p. 124) } \end{aligned}$ | General Genetics | 3 | $\begin{aligned} & \& 435 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ |  |  |
| $\begin{aligned} & \text { BIO } 420 \\ & \text { (p. 124) } \end{aligned}$ | Seminar (Satisfies Cap Major Capstone) | 1 | $\begin{aligned} & \text { BIO } 439 \\ & (\text { p. 124) } \end{aligned}$ | Analysis Biol Data |  |
| Select two env | nmental/ecological courses from: ${ }^{\text {2, } 6}$ | 7 | $\begin{aligned} & \text { BIO } 441 \\ & \text { (p. 124) } \end{aligned}$ | Envirn Plant Bio |  |
| $\begin{aligned} & \text { BIO } 301 \\ & \text { (p. 124) } \end{aligned}$ | Evolution |  | $\begin{aligned} & \text { BIO } 445 \\ & \text { (p. 124) } \end{aligned}$ | Evolution\&Devipmnt |  |
| $\begin{aligned} & \text { BIO 309 } \\ & \text { (p. 124) } \\ & \& 309 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ | Comp Anat Vertebrts and Comp Anatomy Lab |  | BIO 450 <br> (p. 124) <br> \& 450L <br> (p. 124) | Comp Animal Physiol and Comp Animal Phys Lab |  |
| $\begin{aligned} & \text { BIO 310L } \\ & \text { (p. 124) } \end{aligned}$ | Ecology Lab |  | $\begin{aligned} & \text { BIO } 452 \\ & (\mathrm{p} .124) \end{aligned}$ | Bio Rivers \& Lakes and Bio River\&Lake Lab |  |
| $\begin{aligned} & \text { BIO } 311 \\ & \text { (p. 124) } \end{aligned}$ | Intro Entomology |  | $\begin{aligned} & \& 452 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ |  |  |
| $\begin{aligned} & \text { BIO 312L } \\ & \text { (p. 124) } \end{aligned}$ | Genetics Lab |  | $\begin{aligned} & \text { BIO } 459 \\ & (\text { p. 124) } \end{aligned}$ | Envirnmntl Ecology and Envirnmtl Eco Lab |  |
| $\begin{aligned} & \text { BIO } 314 \\ & (\text { p. 124) } \end{aligned}$ | Plant Biology and Plant Bio Lab |  | $\begin{aligned} & \& 459 \mathrm{~L} \\ & (\mathrm{p} .124) \end{aligned}$ |  |  |
| $\begin{aligned} & \& 314 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ |  |  | $\begin{aligned} & \text { BIO } 460 \\ & (\text { p. 124) } \end{aligned}$ | Intro Bioinformatics |  |
| $\begin{aligned} & \text { BIO 320 } \\ & \text { (p. 124) } \\ & \text { \& 320L } \\ & \text { (p. 124) } \end{aligned}$ | Marine Biology and Marine Biology Lab |  | BIO 461 <br> (p. 124) <br> \& 461L <br> (p. 124) | Invertebrate Zoology and Invertbrt Zoology Lab |  |
| $\begin{aligned} & \text { BIO } 340 \\ & \text { (p. 124) } \\ & \&=3401 \end{aligned}$ | Cltr Biodiv\&Res Mgt and Cltr Biodiv\&Res Lab |  | $\begin{aligned} & \text { BIO } 465 \\ & \text { (p. 124) } \end{aligned}$ | Disease Ecology |  |
| (p. 124) |  |  | $\begin{aligned} & \text { BIO } 480 \\ & (\text { p. 124) } \end{aligned}$ | Prin of Microscopy and Microscopy Lab |  |
| $\begin{aligned} & \text { BIO } 359 \\ & (\text { p. 124) } \end{aligned}$ | Sustainable Biosphre |  | $\begin{aligned} & \& 480 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ |  |  |
| $\begin{aligned} & \text { BIO } 360 \\ & \text { (p. 124) } \end{aligned}$ \& 360L | Island Environ Bio and Island Environ Lab |  | $\begin{aligned} & \text { BIO } 489 \\ & \text { (p. 124) } \end{aligned}$ | Mycology |  |
| (p. 124) |  |  | elect two ba | biomedical courses from: ${ }^{3,6}$ | 7 |
| $\begin{aligned} & \text { BIO } 370 \\ & \text { (p. 124) } \end{aligned}$ | Conservatn Biology |  | $\begin{aligned} & \text { BIO } 301 \\ & \text { (p. 124) } \end{aligned}$ | Evolution |  |
| $\begin{aligned} & \text { BIO } 402 \\ & (\text { p. 124) } \\ & \& 402 \mathrm{~L} \\ & (\mathrm{p} .124) \end{aligned}$ | Vertebrate Zoology and Vertbrate Zoolgy Lab |  | BIO 309 <br> (p. 124) <br> \& 309L <br> (p. 124) | Comp Anat Vertebrts and Comp Anatomy Lab |  |
| $\begin{aligned} & \text { BIO } 407 \\ & \text { (p. 124) } \end{aligned}$ | Plant Div \& Ecol and Plant Div \& Ecol Lab |  | $\begin{aligned} & \text { BIO } 311 \\ & \text { (p. 124) } \end{aligned}$ | Intro Entomology |  |
| $\begin{aligned} & \& 407 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ |  |  | $\begin{aligned} & \text { BIO 312L } \\ & \text { (p. 124) } \end{aligned}$ | Genetics Lab |  |
| $\begin{aligned} & \text { BIO } 409 \\ & \text { (p. 124) } \\ & \& 409 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ | Ecol Restoration and Ecol Restoration Lab |  | BIO 403 <br> (p. 124) <br> \& 403L <br> (p. 124) | Physiology I and Physiology Lab |  |
| $\begin{aligned} & \text { BIO } 411 \\ & \text { (p. 124) } \end{aligned}$ | General Microbiology and Gen Microbiology Lab |  | $\begin{aligned} & \text { BIO } 404 \\ & (\text { p. 124) } \end{aligned}$ | Physiology II |  |
| $\begin{aligned} & \& 411 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ |  |  | $\begin{aligned} & \text { BIO } 411 \\ & \text { (p. 124) } \end{aligned}$ | General Microbiology and Gen Microbiology Lab |  |
| $\begin{aligned} & \text { BIO } 421 \\ & \text { (p. 124) } \end{aligned}$ | Biological Problems ${ }^{4}$ |  | $\begin{aligned} & \& 411 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ |  |  |


| $\begin{aligned} & \text { BIO } 412 \\ & (\text { p. 124) } \end{aligned}$ | Genetics Human Dis |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { BIO } 415 \\ & (\text { p. 124) } \end{aligned}$ | Neurobiology |  |
| $\begin{aligned} & \text { BIO } 421 \\ & \text { (p. 124) } \end{aligned}$ | Biological Problems ${ }^{4}$ |  |
| $\begin{aligned} & \text { BIO } 427 \\ & (\text { p. 124) } \end{aligned}$ | Immunology |  |
| $\begin{aligned} & \text { BIO } 439 \\ & \text { (p. 124) } \end{aligned}$ | Analysis Biol Data |  |
| $\begin{aligned} & \text { BIO } 440 \\ & \text { (p. 124) } \\ & \& 440 \mathrm{~L} \\ & (\mathrm{p} .124) \end{aligned}$ | Cell Biology and Cell Bio Lab |  |
| $\begin{aligned} & \text { BIO } 442 \\ & \text { (p. 124) } \\ & \& 442 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ | Developmental Bio and Devlpmntl Bio Lab |  |
| $\begin{aligned} & \text { BIO } 445 \\ & \text { (p. 124) } \end{aligned}$ | Evolution\&Devlpmnt |  |
| $\begin{aligned} & \text { BIO } 460 \\ & \text { (p. 124) } \end{aligned}$ | Intro Bioinformatics |  |
| BIO 461 <br> (p. 124) <br> \& 461L <br> (p. 124) | Invertebrate Zoology and Invertbrt Zoology Lab |  |
| $\begin{aligned} & \text { BIO } 462 \\ & \text { (p. 124) } \end{aligned}$ | Molecular Biology |  |
| $\begin{aligned} & \text { BIO } 465 \\ & \text { (p. 124) } \end{aligned}$ | Disease Ecology |  |
| $\begin{aligned} & \text { BIO } 466 \\ & \text { (p. 124) } \end{aligned}$ | Bio-Infectious Dis |  |
| $\begin{aligned} & \text { BIO } 470 \\ & \text { (p. 124) } \end{aligned}$ | Cancer Biology |  |
| $\begin{aligned} & \text { BIO } 475 \\ & \text { (p. 124) } \\ & \& 475 \mathrm{~L} \\ & (\text { p. 124) } \end{aligned}$ | Human Anatomy and Human Anatomy Lab |  |
| $\begin{aligned} & \text { BIO 480 } \\ & \text { (p. 124) } \\ & \& 480 \mathrm{~L} \\ & (\text { p. 124) } \end{aligned}$ | Prin of Microscopy and Microscopy Lab |  |
| $\begin{aligned} & \text { BIO } 489 \\ & (\mathrm{p} .124) \end{aligned}$ | Mycology |  |
| CHM 420 <br> (p. 124) | Biochemistry |  |
| Select four electives, two with accompanying labs, from the group above. ${ }^{5,6}$ |  | 14 |
| Breadth ${ }^{7}$ |  |  |
| $\begin{aligned} & \text { ASI } 150 \\ & \text { (p. 124) } \end{aligned}$ | Intr to the Univ Exp | 1 |
| Social \& Behavioral Sciences (includes CAP Social Science) |  | 6 |
| Total Hours to total at least |  | 120 |

1 The Department of Biology supports national standards established by the National Institutes of Health for the responsible, humane treatment and housing of animals. The biology curriculum contains some laboratory courses in which dissection and vivisection are necessary and required in order to convey an understanding of certain biological concepts. All students are expected to participate in such laboratory exercises in the introductory biology sequence, BIO 151L (p. 124) and BIO 152L (p. 124) which involve dissection and/or vivisection. In other elective formal laboratory courses in which dissection and vivisection occur, it is expected that students will participate in all aspects of the laboratory. No alternatives to dissection or vivisection will be offered in these courses. It is ultimately the responsibility of students to make certain that they enroll in courses in which they are able to participate in all required exercises, and to obtain information from each instructor as to the specific laboratory course content and requirements. The Department of Biology maintains an updated list of laboratory courses in which dissection and/or vivisection is required in order to assist students in the selection of course work.
2 One with accompanying laboratory.
3 One with accompanying laboratory. BIO 462 (p. 124) strongly recommended as one of two courses.
4 By permission only. Qualifies as a laboratory elective for any category.
5 One of the following Non-BIO science courses may include: CHM 201 (p. 124), CHM 302 (p. 124), CHM 303 (р. 124), CHM 420 (p. 124),MTH 367 (p. 124),CPS 107 (р. 124),CPS 111 (p. 124),CPS 132 (p. 124), GEO 208 (p. 124), GEO 308 (p. 124), GEO 401 (p. 124), Other Non-BIO science courses may be included with the approval of the chairperson.
6 A minimum grade of $C$ - is required.
7 HST 340 (p. 124), HST 341 (p. 124) or HST 342 (p. 124) are highly recommended.

## Bachelor of Science with a Major in Environmental Biology (evb) Minimum 120 Hours

Environmental biology is a science specialization based upon the fundamentals of biology and ecology, applying interdisciplinary skills, knowledge and principles to the environmental problems facing society today. Students entering this dynamic field could become directly involved in addressing some of the significant global problems related to human impact on the environment. In addition to the standard base of courses required of most biology majors, the curriculum also requires a challenging core of environmentally related science courses and course work drawn from a multidisciplinary elective pool that includes offerings in the humanities and social sciences.

Internship Program: Majors will participate in the EVB internship program (BIO 499, see course prerequisites), where they will have the unique opportunity to obtain valuable training and experience under the mentorship of established scientists and other environmental professionals.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| REL 103 | Introduction to Religioius \& Theological Studies |  |
| :---: | :---: | :---: |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Wr | ting Seminar ${ }^{3}$ | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communica |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Bounda |  | variable credit |
| Faith Tradition |  |  |
| Practical Ethic | al Action |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variable credit |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

Completed with ASI 110 and ASI 120 .
Or ENG 100A and ENG 100B, or ENG 200H, by placement.

Completed with ENG 200 H or ASI 120.

| Science Breadth Requirements |  |  |
| :---: | :---: | :---: |
| (Satisfies CAP Mathematics and CAP Natural Science) |  |  |
| CHM 123 <br> (p. 124) <br> \& 123L (p. 124) | General Chemistry and Gen Chemistry Lab | 4 |
| CHM 124 <br> (p. 124) <br> \& 124L (p. 124) | General Chemistry and Gen Chemistry Lab | 4 |
| CHM 313 <br> (p. 124) <br> \& 313L (p. 124) | Organic Chemistry and Organic Chemistry Lab | 4 |
| CHM 314 <br> (p. 124) <br> \& 314L (p. 124) | Organic Chemistry and Organic Chem Lab | 4 |
| GEO 115 <br> (p. 124) <br> \& 115L (p. 124) | Physical Geology and Physical Geology Lab | 4 |
| $\begin{aligned} & \text { GEO } 116 \\ & \text { (p. 124) } \\ & \text { \& } 116 \mathrm{~L}(\text { p. 124) } \end{aligned}$ | Geolgcl Hst-Earth and Geolgcl Hst-Earth Lb | 4 |
| MTH 367 <br> (p. 124) | Statistical Meth ${ }^{2}$ | 3 |
| $\begin{aligned} & \text { PHY } 201 \\ & \text { (p. 124) } \\ & \text { \& 201L (p. 124) } \end{aligned}$ | General Physics and General Physics Lab | 4 |


| $\begin{aligned} & \text { PHY } 202 \\ & \text { (p. 124) } \\ & \& 202 \mathrm{~L} \text { (p. 124) } \end{aligned}$ | General Physics and General Physics Lab | 4 |
| :---: | :---: | :---: |
| Select one sequence from: |  | 6-8 |
| MTH 148 <br> (p. 124) <br> \& MTH 149 <br> (p. 124) | Introductory Calc I and Introductory Calc II |  |
| MTH 168 <br> (p. 124) <br> \& MTH 169 <br> (p. 124) | Anly Geom \& Calc I and Anly Geom \& Calc II ${ }^{1}$ |  |
| Select one course from: |  | 3-4 |
| $\begin{aligned} & \text { GEO } 307 \\ & (\text { p. 124) } \end{aligned}$ | Geomorphology |  |
| $\begin{aligned} & \text { GEO } 308 \\ & \text { (p. 124) } \end{aligned}$ | Probs-Envrmntl Geo |  |
| $\begin{aligned} & \text { GEO } 309 \\ & \text { (p. 124) } \end{aligned}$ | Surf\&Groundwtr Hydr |  |
| $\begin{aligned} & \text { GEO } 450 \\ & \text { (p. 124) } \end{aligned}$ | Applied GIS |  |
| Major Requirements ${ }^{3}$ |  |  |
| $\begin{aligned} & \text { BIO } 151 \\ & \text { (p. 124) } \\ & \text { \& 151L (p. 124) } \end{aligned}$ | Concepts of Bio I and Concepts-Bio Lab I | 4 |
| $\begin{aligned} & \text { BIO } 152 \\ & \text { (p. 124) } \\ & \& 152 \mathrm{~L} \text { (p. 124) } \end{aligned}$ | Concepts of Bio II and Concepts-Bio Lab II | 4 |
| $\begin{aligned} & \text { BIO } 299 \\ & (\mathrm{p} .124) \end{aligned}$ | Biology Seminar | 1 |
| $\begin{aligned} & \text { BIO } 310 \\ & \text { (p. 124) } \\ & \& 310 \mathrm{~L} \text { (p. 124) } \end{aligned}$ | Ecology and Ecology Lab | 4 |
| $\begin{aligned} & \text { BIO } 312 \\ & (\mathrm{p} .124) \end{aligned}$ | General Genetics | 3 |
| $\begin{aligned} & \text { BIO } 420 \\ & \text { (p. 124) } \end{aligned}$ | Seminar (Satisfies CAP Major Capstone) | 1 |
| $\begin{aligned} & \text { BIO } 459 \\ & (p .124) \end{aligned}$ | Envirnmntl Ecology | 3 |
| $\begin{aligned} & \text { BIO 479L } \\ & (\mathrm{p.} 124) \end{aligned}$ | Envir Instr Lab | 2 |
| $\begin{aligned} & \text { BIO } 499 \\ & (p .124) \end{aligned}$ | Env Bio Internship | 3 |
| Select three field oriented courses from: ${ }^{3,4}$ |  | 11 |
| $\begin{aligned} & \text { BIO } 301 \\ & \text { (p. 124) } \end{aligned}$ | Evolution |  |
| $\begin{aligned} & \text { BIO } 311 \\ & \text { (p. 124) } \end{aligned}$ | Intro Entomology |  |
| $\begin{aligned} & \text { BIO 312L } \\ & \text { (p. 124) } \end{aligned}$ | Genetics Lab |  |
| $\begin{aligned} & \text { BIO } 320 \\ & \text { (p. 124) } \\ & \& 320 \mathrm{~L} \\ & \text { (p. 124) } \end{aligned}$ | Marine Biology and Marine Biology Lab |  |


BIO $489 \quad$ Mycology
(p. 124)

Breadth

| ASI 150 | Intr to the Univ Exp | 1 |
| :--- | :--- | :--- |
| (p. 124) |  |  |
| Social and Behavioral Sciences (PSY 101 satisfies CAP Social | 6 |  |
| Science) |  |  |
| ANT 150 | Cultural Anthropolgy |  |
| (p. 124) |  |  |
| or PSY 101 | Introductory Psych |  |
| (p. 124) |  |  |
| Elective |  |  |

Total Hours to total at least 120

1 MTH 168 (p. 124) - MTH 169 (p. 124) by placement.
2 Other appropriate statistics courses may be substituted with the approval of the department chairperson.
3 A minimum grade of C - is required.
4 At least two courses with accompanying laboratory. One non-BIO science course approved for science majors may be included in this section with permission. BIO 499 (p. 124) requires the permission of the EVB Program Director.
5 At least one course with accompanying laboratory. One non-BIO science course approved for science majors may be included in this section with permission. BIO 499 (p. 124) requires the permission of the EVB Program Director.
6 By permission only. Qualifies only as a laboratory elective.

## Minor in Biology (bio)

Biology


## Courses

## BIO 101. General Biology I. 3 Hours

Study of the more important biological processes and principles through analysis and synthesis, dealing primarily with the organizational aspects of living things. For the nonscience major.

## BIO 101L. General Biology Laboratory I. 1 Hour

Examination of biological concepts using basic biological techniques and stressing an investigational and experimental approach. One two-hour laboratory per week. Corequisite(s): BIO 101.
BIO 151. Concepts of Biology I: Cell \& Molecular Biology. 3 Hours Study of the molecular and cellular organization of organisms. Topics also include development and genetics. Core biology course.

## BIO 151L. Concepts of Biology Laboratory: Cell \& Molecular Biology. 1 Hour

An introduction to biological laboratory procedures and instrumentation through a series of observational and experimental exercises at the cellular and molecular level. Core biology course. Corequisite(s): BIO 151.

## BIO 152. Concepts of Biology II: Evolution \& Ecology. 3 Hours

Study of evolution and ecology. Topics include phylogeny, systematics, and conservation. Core biology course. BIO 151 recommended.
BIO 152L. Concepts of Biology Laboratory II: Evolution \& Ecology. 1 Hour
An introduction to biological laboratory exercises at the organismal and the system level through a series of observational and experimental exercises in evolution, ecology and behavioral ecology. Core biology course. Corequisite(s): BIO 152.

## BIO 299. Biology Seminar. 1 Hour

Introduction to biological journals and abstracting materials. Practice in reviewing, abstracting, and presenting biological information, and career development. Core biology course. Biology and environmental biology majors only. Prerequisite(s): BIO 152.

## BIO 301. Evolution. 3 Hours

Theory and evidence of organic evolution, with emphasis on microevolutionary change and population genetics. Prerequisite(s): BIO 152.

BIO 309. Comparative Anatomy of the Vertebrates. 3 Hours
Study of changes that have occurred in the vertebrate body with the passage of time, and analysis of their significance. Prerequisite(s): BIO 152.

## BIO 309L. Comparative Anatomy Laboratory. 1 Hour

Dissection and study of the anatomical structure of representative vertebrate animals. One three-hour laboratory per week. Corequisite(s): BIO 309.

## BIO 310. Ecology. 3 Hours

Interrelationship of plants, animals, and micro-organisms with the physical-chemical environment: nutrient cycles, energy flow, ecosystems, and factors affecting distribution and abundance of organisms. Core biology course. Prerequisite(s): BIO 152.

## BIO 310L. Ecology Laboratory. 1 Hour

Measurement of population, community, and environmental variables in terrestrial and aquatic systems. The lab is field-based using local ecological resources. One three-hour laboratory per week and weekend field trips. Corequisite(s): BIO 310.

## BIO 311. Introductory Entomology. 3 Hours

Classification, physiology, ecology, and impact of insects on society. Prerequisite(s): BIO 152.

## BIO 312. General Genetics. 3 Hours

Study of the principles of variation and heredity covering both Mendelian and molecular genetics. Core biology course. Prerequisite(s): BIO 152.
BIO 312L. Genetics Laboratory. 1 Hour
Exploration of heredity using molecular genetic methods. One three-hour laboratory per week. Corequisite(s): BIO 312.

## BIO 314. Plant Biology. 3 Hours

Consideration of structure, function, reproduction, and inheritance as applicable in the plant patterns of life. Emphasis on the vascular plants. Prerequisite(s): BIO 152.

## BIO 314L. Plant Biology Laboratory. 1 Hour

Emphasis on generalized structure and function of plants. One three-hour laboratory per week. Corequisite(s): BIO 314.

## BIO 320. Marine Biology. 2 Hours

Introduction to the diversity of marine life including the physical-chemical environment. Prerequisite(s): Permission of instructor. . Corequisite(s): BIO 320L.

## BIO 320L. Marine Biology Laboratory. 2 Hours

Examination of marine organisms and processes. Laboratory work conducted on UD campus and at off-campus field sites in the southern United States or Hawaii. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 320.

## BIO 330. Animal Behavior. 3 Hours

An evolutionary approach to the study of animal behavior, emphasizing both proximate mechanisms and functional explanations of the survival value of behavior. Prerequisite(s): BIO 152.

## BIO 330L. Animal Behavior Laboratory. 1 Hour

Analysis of animal behavior using various animal models. One three-hour laboratory per week and occasional Saturday field trips. Corequisite(s): BIO 330.
BIO 340. Culture, Biodiversity \& Resources Management. 3 Hours Field lecture course addressing cultural impacts on biodiversity and conciliatory demands for resource management to preserve the integrity of unique global environments. An experiential study of culture, regional geological morphology and weather-patterns, economic development, the freshwater-marine continuum, resource utilization, environmental law and management on conservation of unique biological habitats and organisms. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 340L.

## BIO 340L. Culture, Biodiversity \& Resources Management Laboratory. 1 Hour

Lab field course on culture, biodiversity and balanced resource management to preserve integrity of unique global environments and compromises with economic development. Assessment of biodiversity in diverse biomes (e.g. elevational and rainforest-desert gradients, watersheds, coral reef systems) will be assessed with experimental design, data collection and analysis. May fulfill only one laboratory requirement for the Biology major. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 340.

## BIO 350. Applied Microbiology. 3 Hours

Fundamentals of applied and environmental microbiology for environmental scientists and engineers. Introduction to microorganisms and their role in bioenvironmental engineering and industrial processes. No science credit for biology majors. Prerequisite(s): BIO 152; CHM 314.

## BIO 350L. Applied Microbiology Laboratory. 1 Hour

An introductory laboratory to acquaint students with basic microbiology laboratory techniques as applied to environmental pollution and industrial fermentations. One three-hour laboratory per week. Corequisite(s): BIO 350.

## BIO 359. Sustainability \& the Biosphere. 3 Hours

Study of the principles of sustainability. All areas of sustainability will be covered with emphasis on ecological facets of sustainability. Discussion of loss of habitat and biodiversity in the context of sustaining natural resources for future generations. Prerequisite(s): BIO 152 or SCI 230.

## BIO 360. Island Environmental Biology. 3 Hours

Field lecture course on environments of Pacific Islands. Study of volcanic geology, island morphology/weather-patterns, native culture, economic development, freshwater-marine continuum and water resource utilization on unique biological habitats. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 360L.

## BIO 360L. Island Environmental Biology Laboratory. 1-2 Hours

Lab field course on Pacific Islands. Ecology of elevational and rainforestdesert gradients, volcanic mountain streams, watersheds, and coral systems with experimental design, data collection and analysis. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 360.

## BIO 370. Conservation Biology. 3 Hours

An ecosystem approach to the study of and threat to local, regional, and global biodiversity. Application of ecological principles of conservation of species and habitats. Prerequisite(s): BIO 152.

## BIO 395. Global Environmental Biology. 3 Hours

Presentation of the biological and ecological principles needed for critical discussion and evaluation of current global environmental issues including food production, human population growth, role of humans and pollution in environmental degradation, and conservation of agricultural, forest and other natural resources. No science credit for biology majors. Prerequisite(s): BIO 101 or SCI 190.

BIO 402. Vertebrate Zoology. 3 Hours
The morphology, physiology, ecology, and distribution of representative vertebrate groups. Prerequisite(s): BIO 310 or BIO 312.
BIO 402L. Vertebrate Zoology Laboratory. 1 Hour
Laboratory focused on the diversity, systematics and ecology of vertebrates. One three-hour laboratory per week. Corequisite(s): BIO 402.

## BIO 403. Physiology I. 3 Hours

Physical-chemical examination of the physiological events occurring in a living system with emphasis on physiology of the cell, excretion, nerves, muscles, bone, blood, heart, circulation, and respiration. Prerequisite(s): BIO 152; CHM 314.

## BIO 403L. Physiology Laboratory I. 1 Hour

Systematic approach to the acquisition and interpretation of information about the physiology of living systems. One three-hour laboratory per week. Corequisite(s): BIO 403.

## BIO 404. Physiology II. 3 Hours

Integrated systems based examination of physiological processes in humans with a special emphasis on molecular mechanisms of pathophysiological conditions in humans and experimental animal systems. Prerequisite(s): BIO 403.

## BIO 407. Plant Diversity \& Ecology. 3 Hours

Lecture course addressing plant diversity and ecology. Course includes an overview of plant systematics and aspects of plant anatomy, population ecology, community ecology, ecosystem ecology, and global ecology. Prerequisite(s): BIO 310.

## BIO 407L. Plant Diversity \& Ecology Laboratory. 1 Hour

Field laboratory course addressing plant diversity and ecology. Includes a series of field labs focused on plant identification, followed by labs focused on quantitatively assessing plants, plant communities, and ecosystems. Labs will take place in a variety of natural areas. Corequisite(s): BIO 407.

## BIO 409. Ecological Restoration. 3 Hours

Principles and practices of ecological restoration. The course presents the rationale and knowledge needed to understand, appreciate, plan and perform ecological restoration. Prerequisite(s): BIO 310.

## BIO 409L. Ecological Restoration Laboratory. 1 Hour

Practical applications of the principles of ecological restoration to a variety of ecosystems. One three-hour laboratory per week. Corequisite(s): BIO 409.

## BIO 411. General Microbiology. 3 Hours

Introductory course stressing the physiology, cultivation, and classification of microbial organisms; their role in medicine, agriculture, and industry. Prerequisite(s): BIO 152; CHM 313.

## BIO 411L. General Microbiology Laboratory. 1 Hour

Lab exercises focusing on the basic techniques involved in the isolation and identification of bacteria, including assessment of biochemical activities, growth characteristics of bacteria, and the impact of the environment on microbial growth. One three-hour laboratory per week. Corequisite(s): BIO 411.

## BIO 412. Genetics Human Diseases. 3 Hours

Study of the molecular genetics of inherited human diseases using a systems approach. Survey of inherited diseases linked to major organs and organ systems. Prerequisite(s): BIO 312; CHM 313.

## BIO 415. Neurobiology. 3 Hours

Structure and function of the brain and nervous system. Emphasis on understanding cellular and molecular events within the nervous system using model organisms. Prerequisite(s): BIO 152; CHM 124.

## BIO 420. Seminar. 1 Hour

Practice in development, presentation, and discussion of papers dealing with biological research problems, and career development. Core biology course. Prerequisite(s): BIO 299, BIO 310, BIO 312.
BIO 421. Biological Problems. 1-2 Hours
Laboratory research problems. Topics arranged with faculty advisors. Prerequisite(s): (BIO 310 or BIO 312); Permission of department chairperson.

## BIO 422. Biological Problems. 1-2 Hours

Library research problems. Topics arranged with faculty advisors. Prerequisite(s): (BIO 310 or BIO 312); Permission of department chairperson.

## BIO 425. Parasitology. 3 Hours

Introduction to the morphology, life history, and clinical significance of parasites and other symbionts. Prerequisite(s): BIO 310 or BIO 312.

## BIO 425L. Parasitology Laboratory. 1 Hour

Recognition of common human parasites. Study of both living and preserved forms. One three-hour laboratory per week. Corequisite(s): BIO 425.

## BIO 427. Immunology. 3 Hours

Discussions of antigens, antibodies, antigenicity, immunogenicity, and antigen-antibody reactions including hypersensitivity, immune tolerance, and transplants. Prerequisite(s): (BIO 403 or BIO 411 or BIO 440 or BIO 442) or CHM 420.

## BIO 435. Microbial Ecology. 3 Hours

Study of the diversity and activity of microorganisms and the interrelationships between microorganisms and their environments with emphasis on aquatic ecosystems. Prerequisite(s): BIO 411; CHM 314.

## BIO 435L. Microbial Ecology Laboratory. 1 Hour

Examination of the methods of isolation and enumeration of microorganisms and techniques for determining their activities in the field and laboratory. One three-hour laboratory per week. Corequisite(s): BIO 435.

BIO 439. Analysis \& Interpretation of Biological Data. 3 Hours
Introducing the nature of some of the important types of data that are generated in biological research, the databases that warehouse such data, the principles involved in the analysis of such data, the use of appropriate software to analyze such data, and the biological interpretation of the results of analysis. Prerequisite(s): BIO 152.

## BIO 440. Cell Biology. 3 Hours

Study of the function, structure, composition, heredity, and growth of cells. Analysis of cell concepts in biochemical terms. Prerequisite(s): BIO 152; CHM 314.

## BIO 440L. Cell Biology Laboratory. 1 Hour

Experimental approaches to explore modern concepts in cell structure, function, and biology. One three-hour laboratory per week. Corequisite(s): BIO 440.
BIO 441. Environmental Plant Biology. 3 Hours
Study of the physiological basis for environmental effects on plant metabolism, structure, growth and development, including plant responses to elevated carbon dioxide, acid deposition, and water stress. Prerequisite(s): BIO 310 or BIO 312.

## BIO 442. Developmental Biology. 3 Hours

Study of animal development, including morphological patterns of development, mechanisms of cellular differentiation, cell-cell interactions during development, and mechanisms of differential gene expression. Emphasis on understanding development at the cellular and molecular levels. Prerequisite(s): BIO 152; CHM 314.

## BIO 442L. Developmental Biology Laboratory. 1 Hour

Exploration of the development of key model organisms from the morphological and molecular perspectives with an emphasis on basic developmental laboratory techniques. One three-hour laboratory per week. Corequisite(s): BIO 442.

## BIO 444. Plant Diversity. 3 Hours

Broad survey of the major divisions of the plant kingdom; consideration of algae, fungi, bryophytes, vascular plant groups; includes generalized life histories, ecological and physiological characteristics, and evolutionary relationships. Prerequisite(s): BIO 310.

## BIO 444L. Plant Diversity Laboratory. 1 Hour

Laboratory studies of the plant groups, including life cycles and evolutionary, physiological, and ecological adaptations. One three-hour laboratory per week. Corequisite(s): BIO 444.

## BIO 445. Evolution \& Development. 3 Hours

Molecular and population genetic examination of the evolution of animal form. Topics include comparative developmental biology, population genetics, and molecular evolution. Prerequisite(s): BIO 312.

## BIO 450. Comparative Animal Physiology. 3 Hours

Organized on a function-system basis, course dealing with environmentorganism interaction and with integrative systems of the principle phyla of animals. Prerequisite(s): (BIO 310 or BIO 312); CHM 124.

BIO 450L. Comparative Animal Physiology Laboratory. 1 Hour Examination of physiological responses to the physical environment. Variations of the physical environment are examined in the field. Study of animals under controlled laboratory conditions with experimental design, data collection and analysis to assess physiological adaptations. One three-hour laboratory or field trip per week. Corequisite(s): BIO 450.

## BIO 452. Biology of Rivers \& Lakes. 3 Hours

The biological interrelationships of organisms in rivers, streams, lakes and ponds including biodiversity, ecological/evolutionary adaptations and structure of aquatic ecosystems. Prerequisite(s): BIO 310.
BIO 452L. Biology of Rivers \& Lakes Laboratory. 1 Hour Laboratory and field exercises emphasizing the biological, chemical and physical attributes of freshwater ecological systems. One three-hour laboratory or field trip per week. Corequisite(s): BIO 452.

## BIO 459. Environmental Ecology. 3 Hours

The application of current ecological knowledge and principles toward the study of human impact on the environment. Emphasis on ecosystem dynamics, applied ecology, disturbance ecology, and approaches to solving global environmental problems. Prerequisite(s): BIO 310.
BIO 459L. Environmental Ecology Laboratory. 1 Hour
Analytical approach to studying applied ecology and human impact on the environment. Emphasis on laboratory and field approaches to solving environmental problems through the use of ecological principles. One three-hour laboratory per week. Corequisite(s): BIO 459.

## BIO 460. Introduction to Bioinformatics. 3 Hours

This course introduces the concepts involved in bioinformatics, using the appropriate material from the disciplines of biology, chemistry and computer science, among others. Prerequisite(s): BIO 152.

## BIO 461. Invertebrate Zoology. 3 Hours

Survey of the structure, activities, life histories, and relationships of the invertebrate animals, with some emphasis on their origin and development. Prerequisite(s): BIO 310 or BIO 312.

## BIO 461L. Invertebrate Zoology Laboratory. 1 Hour

Examination of the structure and function of the major invertebrate phyla. Survey of representative animals with an emphasis on observational skills for analysis of the structural adaptations of live animals. One three-hour laboratory per week. Corequisite(s): BIO 461.

## BIO 462. Molecular Biology. 3 Hours

Analysis of the nature of the gene and gene action. Particular attention to genetic regulation and to recent advances in molecular genetics. Prerequisite(s): BIO 312; CHM 314.

## BIO 465. Disease Ecology. 3 Hours

Examination of ecological factors affecting the emergence and dynamics of infectious diseases of humans and wildlife. History and overview of how diseases are often a product of populations, communities, ecosystems, and global systems. Includes an introduction to epidemiology and current molecular and geographic information system techniques used to study these integrated systems. Prerequisite(s): (BIO 310, BIO 411) or permission of department chairperson or instructor.

## BIO 466. Biology of Infectious Disease. 3 Hours

The nature of infectious diseases, host-parasite relationships in resistance and infection, defense mechanism (antigen-antibody response); survey of the bacteria causing disease in humans. Prerequisite(s): BIO 411.

## BIO 470. Cancer Biology. 3 Hours

Study of growth patterns and causes of cancer at the cellular and molecular levels. Discussion of the hereditary and environmental factors that contribute to the development of the disease in cancer patients. Description of the research being conducted to understand and cure the disease. Prerequisite(s): BIO 403 or BIO 440.

## BIO 475. Human Anatomy. 3 Hours

Study of the fundamental principles of human gross anatomy with emphasis on all organ systems. Prerequisite(s): BIO 152; CHM 314.

## BIO 475L. Human Anatomy Laboratory. 1 Hour

Study of human gross anatomy emphasizing all organs systems using computer-assisted dissection, anatomical human models and occasional dissection of nonhuman cadaver organs. One three-hour laboratory per week. Corequisite(s): BIO 475.

## BIO 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## BIO 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.
BIO 479L. Environmental Instrumentation Laboratory. 2 Hours
The understanding and use of field- and laboratory-based equipment to study current environmental issues. Emphasis on team-centered approaches to investigating environmental problems. Same as GEO 479L. One five-hour laboratory or field trip per week. Prerequisite(s): BIO 310; GEO 116.

## BIO 480. Principles of Microscopy. 3 Hours

Focus on basic principles and theory of light and electron microscopy, and how these techniques address fundamental questions in science. Prerequisite(s): BIO 152.

## BIO 480L. Principles of Microscopy Laboratory. 1 Hour

Application and practice of light and electron microscopy. One three-hour laboratory per week. Corequisite(s): BIO 480.

## BIO 489. Mycology. 3 Hours

Introductory course stressing the interrelationship between fungi and the rest of the biological world. Emphasis on the basic biology and ecology of fungi, decomposition, species interactions, plant pathology and medical mycology. Prerequisite(s): BIO 152.

## BIO 496. Special Topics in Biology. 1-3 Hours

Lecture course addressing advanced topics in biology. Topics are variable depending on faculty teaching the course and the course aims. Students should consult the class schedule. May be repeated. Prerequisite(s): BIO 151, BIO 152.

## BIO 499. Environmental Biology Internship. 3 Hours

Majors will have the opportunity to obtain valuable training and experience under the mentorship of established scientists and professionals. Emphasis on approaches to solving environmental problems including such research areas as bioremediation, risk assessment, and ecological restoration. May be repeated up to six semester hours. No science credit for biology majors. Prerequisite(s): Permission of Environmental Biology Program Coordinator.

## Chemistry

## Majors:

- Bachelor of Arts, Chemistry (p. 134)
- Bachelor of Science, Biochemistry (p. 135)
- Bachelor of Science, Chemistry (p. 137)
- Bachelor of Science, Medicinal-Pharmaceutical Chemistry (p. 138)

Minor:

- Chemistry (p. 139)

The B.S. program in chemistry is approved by the American Chemical Society for the training of professional chemists. Students in the B.S. program in chemistry may choose to conduct an original research project which normally begins with the selection of a research professor and project during the first term of the junior year. The research project may be conducted over the entire senior year, and normally requires two work periods of three to four hours each a week. Alternatively, it may be conducted over a ten-week period during the summer following the junior year. In either case, the project culminates in the final term of the senior year with enrollment in CHM 498, the submission of an acceptable thesis, and the presentation of a seminar in CHM 497. Additional research work to a maximum total of six semester hours may be elected provided that the work extends beyond two semesters.

The B.S. program in biochemistry follows a curriculum which satisfies the needs of students who anticipate careers in the life sciences. Students in the B.S. program in biochemistry may choose to conduct an original research project in biochemistry or a related chemical sub-discipline. In all other respects these biochemically-related research projects are identical to those detailed for the B.S. in chemistry above.

The B.S. program in medicinal-pharmaceutical chemistry is designed to serve students who desire a more focused preparation in the analysis and synthesis of compounds of pharmacological significance. The program also provides a solid foundation for further studies in medicine, pharmacy or forensic chemistry. Students in the B.S. program in medicinal and pharmaceutical chemistry may choose to conduct an original research project, typically in synthetic or analytical chemistry. In all other respects these research projects are identical to those detailed for the B.S. in chemistry above.

The B.A. program in chemistry provides a curriculum which prepares students for a wide range of interdisciplinary professions. The traditional B.S. curriculum has been modified in the B.A. program, most notably in mathematics, physics, and advanced chemistry. The program is sufficiently flexible to afford a wide selection of courses in the humanities. Science courses may be chosen to provide a preparation for professions such as medicine, dentistry, optometry, veterinary medicine, biochemistry, education, and law, as well as for employment in many other areas which require a background in science.

A minor in chemistry consists of twenty semester hours.

Faculty<br>Mark B. Masthay, Chairperson<br>Professors Emeriti: Fratini, Keil, Knachel, Morrow, Singer<br>Associate Professors: Benin, Church, Johnson, Lopper, Masthay, S.<br>Swavey<br>Assistant Professors: Crosson, Mammana<br>Visiting Assistant Professor: Trohalaki, Turner<br>Lecturer: Trick<br>Lab Instructors: Eckerle, Hils, Piepgrass, R. Swavey

## Bachelor of Arts with a major in Chemistry (chm) Minimum 124 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3
ENG $200 \quad$ Writing Seminar II
Oral Communication 3

| CMM $100 \quad$ Principles of Oral Communication | 3 |
| :--- | :--- | :--- |

Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study $\quad$ variable

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3

Major Capstone 0-3

[^3]
## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)
L2 Proficiency (Proficiency in a language other than English) 0-11
Literature (May include CAP Components) 3
Mathematics (Satisfies CAP Mathematics) 9

| MTH 148 <br> (p. 134) <br> \& MTH 149 <br> (p. 134) | Introductory Calc I and Introductory Calc II |  |
| :---: | :---: | :---: |
| MTH 367 <br> (p. 134) | Statistical Meth I |  |
| Natural Sciences (Applies to CAP Natural Science) |  | 8 |
| $\begin{aligned} & \text { PHY } 201 \\ & \text { (p. 134) } \\ & \& \text { 201L } \\ & \text { (p. 134) } \end{aligned}$ | General Physics and General Physics Lab |  |
| PHY 202 <br> (p. 134) <br> \& 202L <br> (p. 134) | General Physics and General Physics Lab |  |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{1}$ |  | 36 |
| (CHM 123 applies to CAP Natural Science) |  |  |
| CHM 123 <br> (p. 134) <br> \& 123L (p. 134 | General Chemistry and Gen Chemistry Lab | 4 |
| CHM 124 <br> (p. 134) <br> \& 124L (p. 134 | General Chemistry and Gen Chemistry Lab | 4 |
| CHM 201 <br> (p. 134) <br> \& 201L (p. 134 | Quantitative Anal and Quant Analysis Lab | 4 |
| $\begin{aligned} & \text { CHM } 302 \\ & \text { (p. 134) } \end{aligned}$ | Physical Chemistry | 3-6 |
| or CHM 303 <br> (p. 134) <br> \& CHM 304 <br> (p. 134) | Physical Chemistry and Physical Chemistry |  |
| CHM 313 <br> (p. 134) <br> \& 313L (p. 134 | Organic Chemistry and Organic Chemistry Lab | 4 |
| $\begin{aligned} & \text { CHM } 314 \\ & \text { (p. 134) } \\ & \text { \& } 314 \mathrm{~L}(\text { p. 134) } \end{aligned}$ | Organic Chemistry and Organic Chem Lab | 4 |
| $\begin{aligned} & \text { CHM } 496 \\ & \text { (p. 134) } \end{aligned}$ | Prof Practice Seminr (Satisfies CAP Major Capstone) | 0 |
| Select four courses from: ${ }^{2}$ |  | 10-13 |
| $\begin{aligned} & \text { CHM } 317 \\ & \text { (p. 134) } \end{aligned}$ | Spectro Idn-Org Cmpd |  |
| $\begin{aligned} & \text { CHM } 341 \\ & (\text { p. 134) } \end{aligned}$ | Environmental Chem |  |
| $\begin{aligned} & \text { CHM } 404 \\ & \text { (p. 134) } \end{aligned}$ | Topics-Physical Chm |  |
| $\begin{aligned} & \text { CHM } 412 \\ & \text { (p. 134) } \end{aligned}$ | Intermed Organic Chm |  |
| CHM 415 <br> (p. 134) | Analytical Chemistry |  |
| CHM 415L (p. 134) | Analytical Chem Lab |  |
| $\begin{aligned} & \text { CHM } 417 \\ & \text { (p. 134) } \end{aligned}$ | Inorganic Chemistry |  |


| CHM 418L | Inorganic Chem Lab |
| :--- | :--- |
| (p. 134) |  |
| CHM 420 | Biochemistry |
| (p. 134) |  |
| CHM 426 | Biosynthetic Org Chm |
| (p. 134) |  |
| CHM 427 | Medicinal Chemistry |
| (p. 134) |  |
| CHM 451 | Gen Biochemistry I |
| (p. 134) |  |
| CHM 452 | Gen Biochemistry II |
| (p. 134) |  |
| CHM 462L | Biochemistry Lab |
| (p. 134) |  |
| CHM 477 | Honors Thesis |
| (p. 134) |  |
| CHM 478 | Honors Thesis |
| (p. 134) |  |
| CHM 497 | Research Seminar |
| (p. 134) <br> \& CHM 498 |  |
| and Research \& Thesis |  |
| (p. 134) |  |
| CHM 499 | Research \& Thesis |
| (p. 134) |  |

## Breadth

| ASI $150 \quad$ Intr to the Univ Exp | 1 |
| :--- | ---: |
| (p. 134) |  |
| Total Hours to total at least | 124 |

1 Advanced placement is permitted.
2 May substitute two upper level courses from other science departments with permission of chairperson.

## Bachelor of Science with a major in Biochemistry (bcm) Minimum 120 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected

| First-Year Humanities Commons ${ }^{1}$ | 12 |
| :--- | :--- |
| HST 103 | The West \& the World |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$ ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable
credit
Faith Traditions

| Practical Ethical Action |  |
| :--- | ---: |
| Inquiry | variable |
| Integrative | credit |
| Advanced Study |  |
| Philosophy and/or Religious Studies | 3 |
| Historical Studies | $0-3$ |
| Diversity and Social Justice |  |
| Major Capstone |  |
| Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 | Completed with ENG 200H or ASI 120. |

## Science Breadth Requirements

| CPS 132 | Progrmmng-Engr \& Sci | 3 |
| :--- | :--- | :---: |
| (p. 134) |  | 4 |
| MTH 168 <br> (p. 134) | Anly Geom \& Calc I (Satisfies CAP Mathematics) | 4 |
| MTH 169 <br> (p. 134) | Anly Geom \& Calc II | 4 |
| MTH 218 <br> (p. 134) | Anly Geom \& Calc III | 4 |
| PHY 206 <br> (p. 134) | Gen Physics I Mech | 3 |
| PHY 207 <br> (p. 134) | Gen Phy II Ele \& Mag | 3 |
| PHY 201L <br> (p. 134) | General Physics Lab | 1 |
| Select courses from: | 10 |  |


| BIO 312 | General Genetics |
| :--- | :--- |
| (p. 134) |  |
| BIO 314 | Plant Biology |
| BIO 403 |  |
| (p. 134) | Physiology I |
| BIO 404 | Physiology II |
| (p. 134) |  |
| BIO 411 | General Microbiology |
| (p. 134) |  |
| BIO 427 | Immunology |
| (p. 134) |  |
| BIO 440 | Cell Biology |
| (p. 134) |  |
| BIO 462 | Molecular Biology |
| (p. 134) |  |
| BIO 466 | Bio-Infectious Dis |
| (p. 134) |  |
| CHM 404 | Topics-Physical Chm |
| (p. 134) |  |
| CHM 412 | Intermed Organic Chm |
| (p. 134) |  |
| CHM 415 Analytical Chemistry <br> (p. 134) and Analytical Chem Lab <br> \& 415L  <br> (p. 134)  |  |


| CHM 417 | Inorganic Chemistry |
| :--- | :--- |
| (p. 134) |  |
| CHM 418L | Inorganic Chem Lab |
| (p. 134) |  |
| CHM 426 | Biosynthetic Org Chm |
| (p. 134) |  |
| CHM 427 | Medicinal Chemistry |
| (p. 134) |  |
| CHM 497 | Research Seminar |
| (p. 134) | and Research \& Thesis |
| \& CHM 498 |  |
| (p. 134) |  |
| CHM 499 | Research \& Thesis |
| (p. 134) |  |

Major Requirements ${ }^{1}$ ..... 45
Satisfies CAP Natural Science

Year 1

| BIO 151 | Concepts of Bio I | 4 |
| :--- | :--- | ---: |
| (p. 134) | and Concepts-Bio Lab I |  |
| \& 151L (p. 134) |  | 3 |
| BIO 152 | Concepts of Bio II |  |
| (p. 134) |  | 4 |
| CHM 123 | General Chemistry |  |
| (p. 134) | and Gen Chemistry Lab |  |
| \& 123L (p. 134) |  | 4 |
| CHM 124 | General Chemistry |  |
| (p. 134) | and Gen Chemistry Lab |  |

\& 124L (p. 134)
Year 2

| CHM 201 <br> (p. 134) | Quantitative Anal and Quant Analysis Lab | 4 |
| :---: | :---: | :---: |
| \& 201L (p. 134) |  |  |
| CHM 313 <br> (p. 134) <br> \& 313L (p. 134) | Organic Chemistry and Organic Chemistry Lab | 4 |
| CHM 314 <br> (p. 134) <br> \& 314L (p. 134) | Organic Chemistry and Organic Chem Lab | 4 |
| BIO Elective and Laboratory 4 |  |  |

Year 3
$\left.\begin{array}{llc}\text { CHM 303 } \\ \text { (p. 134) } \\ \text { \& 303L (p. 134) }\end{array} \quad \begin{array}{l}\text { Physical Chemistry } \\ \text { and Physical Chem Lab }\end{array}\right)$
(p. 134)

Year 4

| CHM 496 Prof Practice Seminr (Satisfies CAP Major <br> (p. 134) Capstone) |  |
| :--- | :--- |
| Breadth |  |
| ASI 150 Intr to the Univ Exp <br> (p. 134)  <br> Foreign Language  <br> Social and Behavioral Sciences (Includes CAP Social Science)  <br> Total Hours to total at least  |  |
| 1 Advanced placement is permitted. |  |
| Bachelor of Science with a major in |  |
| Chemistry (chm) Minimum 120 Hours |  |

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ | $0-3$ |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |  |

ENG 200 Writing Seminar II
Oral Communication

| CMM 100 | Principles of Oral Communication |
| ---: | ---: |
| Mathematics | 3 |

Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable

| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |
| Integrative |

Advanced Study $\quad$| variable |
| :--- |
| credit |

| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## Science Breadth Requirements

Mathematics, Computer Sciences ${ }^{1} 1$
CPS 132 Progrmmng-Engr \& Sci
(p. 134)

MTH 168 Anly Geom \& Calc I (Satisfies CAP Mathematics)
(p. 134)
6-8

Quantitative Anal 4 and Quant Analysis Lab

Organic Chemistry and Organic Chemistry Lab

Organic Chemistry 4
and Organic Chem Lab
\& 314L (p. 134)
Year 3
CHM 303
(p. 134)
\& 303L (p. 134)
CHM 304
(p. 134)
\& 304L (p. 134)
CHM 317
(p. 134)

CHM 417 Inorganic Chemistry 3
(p. 134)

CHM 418L Inorganic Chem Lab 1
(p. 134)

CHM 495 Intro-Resrch Seminar 0
(p. 134)

Year 4
CHM 415
(p. 134)
\& 415L (p. 134)
CHM 420 Biochemistry 3

| or CHM 451 | Gen Biochemistry I |
| :--- | :--- |
| (p. 134) | and Gen Biochemistry II |
| \& CHM 452 |  |
| (p. 134) |  |
| CHM 496 Prof Practice Seminr (Satisfies CAP Major | 0 |
| (p. 134) | Capstone) |


| Select three courses from: |
| :--- | :--- |


| CHM 404 | Topics-Physical Chm |
| :--- | :--- |
| (p. 134) |  |
| CHM 412 | Intermed Organic Chm |
| (p. 134) |  |
| CHM 426 | Biosynthetic Org Chm |

CHM 426 Biosynthetic Org Chm
(p. 134)

CHM 427 Medicinal Chemistry
(p. 134)

CHM 462L Biochemistry Lab
(p. 134)

CHM 477 Honors Thesis
(p. 134)

CHM 478 Honors Thesis
(p. 134)

CHM 497 Research Seminar
(p. 134)
and Research \& Thesis
\& CHM 498
(p. 134)

CHM 499 Research \& Thesis
(p. 134)

Breadth

| ASI 150 | Intr to the Univ Exp | 1 |
| :--- | :--- | ---: |
| (p. 134) |  | $6-8$ |

Social and Behavioral Sciences (Includes CAP Social Science) 6
Total Hours to total at least
1 Should be completed during the first two years.
2 Advanced placement is permitted.
3 May substitute one approved science course from another department.

## Bachelor of Science in Medicinal- <br> Pharmaceutical Chemistry (mcm) <br> Minimum 120 hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3

ENG 200 Writing Seminar II
Oral Communication3

CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable <br> credit |
| :--- | :--- |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Science Breadth Requirements

Satisfies CAP Mathematics and CAP Natural Science

| BIO 151 | Concepts of Bio I | 4 |
| :--- | :--- | ---: |
| (p. 134) | and Concepts-Bio Lab I |  |
| \& 151L (p. 134) |  | 4 |
| BIO 152 | Concepts of Bio II |  |
| (p. 134) | and Concepts-Bio Lab II |  |
| \& 152L (p. 134) |  | 6 |
| MTH 148 | Introductory Calc I |  |
| (p. 134) | and Introductory Calc II |  |
| \& MTH 149 |  | 3 |
| (p. 134) |  | 4 |
| MTH 367 | Statistical Meth I |  |
| (p. 134) |  |  |
| PHY 201 | General Physics |  |
| (p. 134) | and General Physics Lab |  |
| \& 201L (p. 134) |  |  |
| PHY 202 | General Physics |  |
| (p. 134) | and General Physics Lab |  |
| \& 202L (p. 134) |  |  |

Major Requirements ${ }^{2,3} 53$
Year 1

| CHM 123 | General Chemistry | 4 |
| :--- | :--- | ---: |
| (p. 134) | and Gen Chemistry Lab |  |
| \& 123L (p. 134) |  |  |
| CHM 124 | General Chemistry | 4 |
| (p. 134) | and Gen Chemistry Lab |  |
| \& 124L (p. 134) |  |  |

Year 2

| CHM 201 | Quantitative Anal | 4 |
| :--- | :--- | :--- |
| (p. 134) | and Quant Analysis Lab |  |
| \& 201L (p. 134) |  |  |


| CHM 313 <br> (p. 134) <br> \& 313L (p. 134) | Organic Chemistry and Organic Chemistry Lab | 4 |
| :---: | :---: | :---: |
| CHM 314 <br> (p. 134) <br> \& 314L (p. 134) | Organic Chemistry and Organic Chem Lab | 4 |
| Year 3 |  |  |
| $\begin{aligned} & \text { CHM } 302 \\ & \text { (p. 134) } \\ & \& 302 \mathrm{~L} \text { (p. 134) } \end{aligned}$ | Physical Chemistry and Physical Chem Lab ${ }^{1}$ | 4 |
| $\begin{aligned} & \text { CHM } 317 \\ & \text { (p. 134) } \end{aligned}$ | Spectro Idn-Org Cmpd | 1 |
| $\begin{aligned} & \text { CHM } 420 \\ & \text { (p. 134) } \end{aligned}$ | Biochemistry ${ }^{4}$ | 3 |
| $\begin{aligned} & \text { CHM 462L } \\ & \text { (p. 134) } \end{aligned}$ | Biochemistry Lab | 1 |
| $\begin{aligned} & \text { CHM } 495 \\ & \text { (p. 134) } \end{aligned}$ | Intro-Resrch Seminar | 0 |
| Year 4 |  |  |
| CHM 319L <br> (p. 134) | Adv Org Synthsis Lab | 1 |
| $\begin{aligned} & \text { CHM } 426 \\ & (\text { p. 134) } \end{aligned}$ | Biosynthetic Org Chm | 3 |
| $\begin{aligned} & \text { CHM } 427 \\ & \text { (p. 134) } \end{aligned}$ | Medicinal Chemistry | 3 |
| $\begin{aligned} & \text { CHM } 454 \\ & \text { (p. 134) } \end{aligned}$ | Rational Drug Design | 3 |
| CHM 463L <br> (p. 134) | Bioanalytical Chem Lab | 1 |
| CHM 496 <br> (p. 134) | Prof Practice Seminr (Satisfies CAP Major Capstone) | 0 |
| Science Requirements |  | 13 |
| Select six semester hours from: ${ }^{5}$ |  |  |
| $\begin{aligned} & \text { CHM } 412 \\ & (\text { p. 134) } \end{aligned}$ | Intermed Organic Chm |  |
| CHM 415 <br> (p. 134) <br> \& 415L <br> (p. 134) | Analytical Chemistry and Analytical Chem Lab |  |
| $\begin{aligned} & \text { CHM } 417 \\ & \text { (p. 134) } \end{aligned}$ | Inorganic Chemistry |  |
| CHM 418L <br> (p. 134) | Inorganic Chem Lab |  |
| $\begin{aligned} & \text { CHM } 497 \\ & \text { (p. 134) } \\ & \text { \& CHM } 498 \\ & \text { (p. 134) } \end{aligned}$ | Research Seminar and Research \& Thesis |  |
| Select two lecture courses and one laboratory from: |  |  |
| $\begin{aligned} & \text { BIO } 403 \\ & \text { (p. 134) } \\ & \& 403 \mathrm{~L} \\ & (\mathrm{p} .134) \end{aligned}$ | Physiology I and Physiology Lab |  |
| $\begin{aligned} & \text { BIO 411 } \\ & \text { (p. 134) } \\ & \& 411 \mathrm{~L} \\ & \text { (p. 134) } \end{aligned}$ | General Microbiology and Gen Microbiology Lab |  |


| BIO 440 | Cell Biology |
| :--- | :--- |
| (p. 134) | and Cell Bio Lab |
| \& 440L |  |
| (p. 134) |  |

Breadth ${ }^{6}$
ASI $150 \quad$ Intr to the Univ Exp 1
(p. 134)

Social and Behavioral Sciences (Includes CAP Social Science) 6
Total Hours to total at least 120
1 Substitution of more advanced courses is possible upon consultation with the Department of Chemistry chairperson.
2 Consult General Requirements for all Bachelor of Science programs and the Common Academic Program requirements.
3 Advanced placement is permitted.
4 Biochemistry courses CHM 451 and CHM 452 may be substituted, with CHM 452 counting as a general elective.
5 Chemistry graduate courses or advanced electives from other departments may be selected with the permission of the Department of Cehmistry chairperson.
6 If composition requirement is waived, the student should seek the English elective. Advanced writing courses are recommended.

## Minor in Chemistry (chm)

## Chemistry

| CHM 123 | General Chemistry |  |
| :--- | :--- | ---: |
| (p. 134) | and Gen Chemistry Lab |  |
| \& 123L (p. 134) |  | 4 |
| CHM 124 <br> (p. 134) <br> \& 124 L (p. 134) | General Chemistry <br> CHM 302 | Physical Chemistry |
| (p. 134) <br> or CHM 303 <br> (p. 134) | Physical Chemistry | 4 |

Select three CHM courses (300/400 level) ${ }^{1} 9$
1 In consultation with the chairperson.

## Courses

CHM 115. College Prepatory Chemistry. 3 Hours
One-term course for students desiring to enter a science or engineering program but whose background is insufficient for CHM 123 and CHM 124. Unacceptable for credit toward chemistry requirements in any chemistry program.
CHM 115L. College Prepatory Chemistry Laboratory. 1 Hour
Course to accompany CHM 115 or to be elected by students in CHM 200 who lack previous chemistry laboratory experience. One three-hour laboratory each week.

CHM 123. General Chemistry. 3 Hours
Comprehensive treatment of the fundamentals of general chemistry. Prerequisite(s): One year of high school chemistry or equivalent.
CHM 123L. General Chemistry Laboratory. 1 Hour
Laboratory course to complement CHM 123. One three-hour laboratory session each week. Corequisite(s): CHM 123.

## CHM 124. General Chemistry. 3 Hours

Comprehensive treatment of the fundamentals of general chemistry. Prerequisite(s): CHM 123.
CHM 124L. General Chemistry Laboratory. 1 Hour
Laboratory course to complement CHM 124. One three-hour laboratory session each week. Prerequisite(s): CHM 123L Corequisite(s): CHM 124.

## CHM 200. Chemistry \& Society. 3 Hours

Course for nonscience majors. The application of chemical principles to the examination of issues such as environmental quality, disease, hunger, synthetic materials, and law enforcement. Depending upon background and experience, a student needing a laboratory course may enroll in either CHM 115L or CHM 123L. Prerequisite(s): One year of high school chemistry or equivalent.

## CHM 201. Quantitative Analysis. 3 Hours

Application of the principles of chemical equilibrium to the theory and techniques of gravimetric, volumetric, spectrophotometric, and electroanalytical methods of chemical analysis. Prerequisite(s): CHM 124, CHM 124L.

CHM 201L. Quantitative Analysis Laboratory. 1 Hour
Course to accompany CHM 201. One three-hour laboratory period each week.

## CHM 234. Energy Resources. 3 Hours

The chemical and geological aspects of formation, production, and benefits/costs (including environmental impacts) of energy derived from fossil fuels (coal and hydrocarbons), biofuels (e.g., ethanol production), radioactive materials (nuclear power), and renewable sources (e.g., geothermal, hydro, wind, and solar power). Prerequisite(s): CHM 123, CHM 124. Corequisite(s): GEO 208.

## CHM 302. Physical Chemistry. 3 Hours

Essential elements of thermodynamics, chemical kinetics, equilibria, and electrochemistry for those with a primary interest in the life sciences. For B.A. chemistry majors and premedical, predental, and biology majors. Prerequisite(s): CHM 124.
CHM 302L. Physical Chemistry Laboratory. 1 Hour
Course to accompany CHM 302. One three-hour laboratory each week. Prerequisite(s): CHM 201, CHM 201L. Corequisite(s): CHM 302.

## CHM 303. Physical Chemistry. 3 Hours

Fundamentals of thermodynamics, chemical kinetics, electrochemistry, and spectroscopy with a mathematics format. For B.S. chemistry and biochemistry majors and chemical engineers. Prerequisite(s): CHM 201 or equivalent. Corequisite(s): MTH 218.
CHM 303L. Physical Chemistry Laboratory. 1 Hour
Course to accompany CHM 303. One three-hour laboratory each week. Prerequisite(s): MTH 218.

## CHM 304. Physical Chemistry. 3 Hours

Fundamentals of thermodynamics, chemical kinetics, electrochemistry, and spectroscopy with a mathematics format. For B.S. chemistry and biochemistry majors and chemical engineers.

## CHM 304L. Physical Chemistry Laboratory. 1 Hour

Course to accompany CHM 304. One three-hour laboratory each week. Corequisite(s): MTH 218.

## CHM 313. Organic Chemistry. 3 Hours

Major topics in organic chemistry including synthesis, mechanisms, stereochemistry, and spectroscopy. Required of all chemistry majors and students in the life sciences. Prerequisite(s): CHM 124.

CHM 313L. Organic Chemistry Laboratory. 1 Hour
Common separation, purification, and analytical techniques including chromatography and spectroscopy. One three-hour laboratory each week. Corequisite(s): CHM 313.

## CHM 314. Organic Chemistry. 3 Hours

Major topics in organic chemistry including synthesis, mechanisms, stereochemistry, and spectroscopy. Required of all chemistry majors and students in the life sciences. Prerequisite(s): CHM 313.

CHM 314L. Organic Chemistry Laboratory. 1 Hour
Synthesis and characterization of organic materials utilizing skills from CHM 313L. One three-hour laboratory each week. Prerequisite(s): CHM 313L. Corequisite(s): CHM 314.

## CHM 317. Spectroscopic Identification of Organic Compounds. 1 Hour

The use of nuclear magnetic resonance, infrared, and mass spectrometry in elucidating structures. Emphasis on interpretation and integration of spectral data in problem solving. Prerequisite(s): (CHM 314, CHM 314L) or equivalent.

CHM 319L. Advanced Organic Synthesis Laboratory. 1 Hour Preparation of organic compounds by single and multi-step synthetic sequences. Basic techniques in synthesis including use of organometallics, inert atmosphere, temperature control, extraction, vacuum distillation, column chromatography, recrystallization, and spectroscopic characterization methods. One four-hour laboratory each week. Prerequisite(s): CHM 314, CHM 314L.
CHM 341. Environmental Chemistry. 3 Hours
An introduction to the chemical processes in the environment. Topics include chemical equilibrium in aqueous solution, reaction mechanisms as applied to atmospheric chemistry, and analytical methods commonly applied to environmental samples. Prerequisite(s): CHM 314 or permission of instructor.

## CHM 341L. Environmental Chemistry Laboratory. 1 Hour

Laboratory course to accompany CHM 341. Corequisite(s): CHM 341.

## CHM 404. Special Topics in Physical Chemistry. 3 Hours

Thorough treatment of topics such as electrochemistry, macromolecules, photochemistry, or spectroscopy. May be repeated as topics change. Prerequisite(s): CHM 302 or CHM 303.

CHM 412. Intermediate Organic Chemistry. 3 Hours
Modern theory and practice of organic chemistry. May include structurereactivity relationships, reaction mechanism, and synthetic topics not normally treated in introductory courses. Prerequisite(s): CHM 302 or equivalent; CHM 313, CHM 314; senior standing.
CHM 415. Analytical Chemistry. 2 Hours
Chemical analysis based on modern instrumentation. Chromatographic, electrochemical, and spectroscopic methods. Prerequisite(s): CHM 201, CHM 201L; (CHM 302 or CHM 304).
CHM 415L. Analytical Chemistry Laboratory. 2 Hours
Course to accompany CHM 415. Two three-hour laboratory sessions each week. Prerequisite(s): CHM 201L; CHM 302 or equivalent.

CHM 417. Inorganic Chemistry. 3 Hours
An advanced course in modern inorganic chemistry. Atomic structure, principles of bonding and structure, acid-base chemistry, periodicity, coordination compounds, nonaqueous solvents, electrochemistry, molecular symmetry, organometallic compounds, and the chemistry of selected representative elements. Prerequisite(s): CHM 314. Corequisite(s): CHM 302 or CHM 304.

## CHM 418L. Inorganic Chemistry Laboratory. 1 Hour

Laboratory course dealing with the synthesis and characterization of inorganic and organometallic compounds. Topics include vacuum and inert atmosphere techniques, separation and purification, spectroscopic characterization, X-ray diffraction, magnetic moment, and conductance measurements. Prerequisite(s): CHM 201L, CHM 314L. Corequisite(s): CHM 417.

## CHM 420. Biochemistry. 3 Hours

The fundamental aspects of the chemistry and biochemistry of carbohydrates, lipids, proteins, and nucleic acids. Enzymology, protein purification, bioenergetics, metabolism of carbohydrates, lipids, amino acids, nucleotides and nucleic acids, elementary molecular biology, and control processes are described. Acceptable preparation for medical school. Prerequisite(s): CHM 314.

## CHM 426. Biosynthetic Organic Chemistry. 3 Hours

Mechanistic fundamentals of the biosynthesis and transformation of organic natural products, with special emphasis on medicinal compounds, toxins, pheromones and other secondary metabolite structures.
Prerequisite(s): (CHM 314, CHM 314L) or equivalent.

## CHM 427. Medicinal Chemistry. 3 Hours

The chemical mechanisms of action of the major drug classes will be surveyed with particular emphasis on the facets of organic chemistry that control drug-receptor interactions, metabolism and mechanisms of toxicity and resistance. First term. Prerequisite(s): CHM 314; (CHM 420 or CHM 451).

## CHM 450. Advanced Organic Synthesis. 3 Hours

Fundamentals of synthesis and transformations of organic compounds, with emphasis on mechanisms; pericyclic reactions; small and medium ring synthesis; chemoselectivity, regioselectivity, stereoselectivity, retrosynthesis, functional group transformations, carbon-carbon bond forming reactions, oxidations, reductions and protecting groups. Prerequisite: (CHM 314, CHM 314L) or equivalent.

## CHM 451. General Biochemistry I. 3 Hours

Discussion of the chemistry and biochemistry of carbohydrates, amino acids, proteins, and nucleic acids, including health-science and methodologic aspects. Descriptions of enzymology, protein purification, and carbohydrate metabolism related to such topics as bioenergetics, membranes, and disease processes. Recommended for students desiring entry into graduate and professional schools. Prerequisite(s): CHM 201, CHM 314.

## CHM 452. General Biochemistry II. 3 Hours

Discussion of selected topics in bioenergetics, and metabolism of lipids, amino acids, porphyrins, nucleic acids, and proteins. Current aspects of nutrition, biochemical genetics, endocrinology, regulation, and genetic engineering addressed and related to health-science topics as time permits. Suitable preparation for medical school. Prerequisite(s): CHM 451.

## CHM 454. Rational Drug Design. 3 Hours

Introduction to drug target selection, lead compound discovery, and application of structure-activity relationships and computational chemistry towards refinement and optimization of lead compounds and their derivatives. Use of molecular graphics software and publicly available macromolecular structure databases will provide the foundation for evaluating macromolecular models of drug targets and allow a hands-on exploration of the structure/function relationships of proteins that have been successful targets of rational drug design. Prerequisite(s): (CHM 420 or CHM 452) or equivalent.

CHM 462L. Biochemistry Laboratory. 1 Hour
Laboratory course to accompany biochemistry lecture courses. Spectrophotometry, pH and dissociation, enzymologic methodology and analytical techniques, chromatographic techniques. Corequisite(s): CHM 420 or CHM 451.
CHM 463L. Bioanalytical Chemistry Laboratory. 1 Hour
Introduction to analytical methods in current use in biochemistry. Course will focus on separations and spectroscopic methods for the analysis of biomolecules. Prerequisite(s): CHM 201, CHM 201L, CHM 302.

## CHM 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## CHM 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## CHM 490L. Scientific Glassblowing. 1 Hour

Theory and practice of glass working. Under the supervision of a professional glassblower, students learn to make several standard seals and fabricate pieces of glass apparatus. Enrollment limited. One three-hour laboratory each week. Grading Option Two. Prerequisite(s): Permission of department chairperson.

## CHM 495. Introduction to Research Seminar. 0 Hours

Research topics presented by visiting scientists and faculty, and the results of thesis research by senior students. Required of all junior chemistry and biochemistry majors in the B.S. programs. Grading Option two.
CHM 496. Professional Practices Seminar. 0 Hours
After discussions of the chemical literature and information retrieval, resumes, graduate education, and career opportunities, students present technical talks on topics with social, ethical, or historical implications. Required of all chemistry and biochemistry majors, both B.S. and B.A.
CHM 497. Research Seminar. 0 Hours
A series of seminars as described under CHM 495. Required of all senior chemistry and biochemistry majors in the B.S. programs.

## CHM 498. Research \& Thesis. 3 Hours

All students in the B.S. programs including co-op students are required to enroll for a minimum of three semester hours in a research course (CHM 498). Students may take additional research semester hours (CHM 499) if the work extends for more than two semesters. Successful completion of research courses requires the submission of a typewritten thesis and the presentation of a seminar. With the prior approval of the department chairperson, B.S. co-op students may substitute work experience for research. Prerequisite(s): Permission of department chairperson.

## CHM 499. Research \& Thesis. 1-3 Hours

All students in the B.S. programs including co-op students are required to enroll for a minimum of three semester hours in a research course (CHM 498). Students may take additional research semester hours (CHM 499) if the work extends for more than two semesters. Successful completion of research courses requires the submission of a typewritten thesis and the presentation of a seminar. With the prior approval of the department chairperson, B.S. co-op students may substitute work experience for research. Prerequisite(s): CHM 498; permission of department chairperson.

## Communication

Bachelor of Arts, Communication (p. )
Concentrations:

- Communication Management
- Communication Studies
- Electronic Media
- Journalism
- Public Relations
- Theatre

Minors:

- Communication (p. 144)
- Political Journalism (p. 144)

The course requirement for communication majors is thirty-nine semester hours. Teacher licensure through the E11A program is an option for communication majors. Consult department chairperson for details.

A minor in communication consists of fifteen semester hours.A minor in political journalism is available for political science majors. The political journalism minor consists of eighteen semester hours. The department also offers a Bachelor of Arts with a major in theatre. See Theatre (p. 260).

## Faculty

Jonathan A. Hess, Chairperson
Professors Emeriti: Blatt, Gilvary, Harwood, Lain, Morlan
Professors: Cusella, Hess, Robinson, Skill, Thompson
Associate Professors: Anderson, Griffin, Han, Scantlin, Wallace, Watters, Yoder
Assistant Professors: Dunlevy, Langhorne, Peters, Taylor, Valenzano Media Executive in Residence: Walters
Lecturers: Angel, Beran, Combs, Dickson, Flynn, Goode, Oh, Walter

## Bachelor of Arts with a major in Communication (CMM) Minimum 124 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |


| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| :---: | :---: | :---: |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Scien |  | 3 |
| Arts |  | 3 |
| Natural Scie |  | 7 |
| Crossing Boundaries |  | variable <br> credit |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variable credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |  |
| 2 Or ENG | and ENG 100B, or ENG 200 H , by placement. |  |
| Complet | with ENG 200H or ASI 120. |  |
| Liberal Studies Curriculum |  |  |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements |  | 39 |
| CMM 100 <br> (р. 142) | Principles of Oral Communication | 3 |
| CMM 201 <br> (p. 142) | Foun-Mass Communcatn | 3 |
| CMM 202 <br> (p. 142) | Foun-Com Thr\&Rsrch | 3 |
| CMM 330 <br> (p. 142) | Media Writing | 3 |
| CMM 480 <br> (p. 142) | Comm Capstone (Satisfies CAP Major Capstone) | 3 |
| Select two courses in CMM or THR ${ }^{3}$ |  | 6 |
| Select one concentration from: |  |  |
| Communication Management (CMT) |  |  |
| CMM 320 <br> (p. 142) | Interpersnal Commnctn | 3 |
| CMM 321 <br> (p. 142) | Small Group Commnctn | 3 |
| CMM 412 <br> (p. 142) | Statistcl Mthd-Comm | 3 |

## Liberal Studies Curriculum

Literature (May include CAP components)3Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)11
Social Sciences (Includes CAP Social Science)39(p. 142)(p. 142)
(p. 142)
CMM 33Comm Capstone (Satisfies CAP Major Capstone)3

## Select one concentration from:

Communication Management (CMT)

| CMM 421 (p. 142) | Commnctn-Organztns | 3 |
| :---: | :---: | :---: |
| Select two courses from: |  | 6 |
| CMM 322 (p. 142) | Intervwng-Comm \& Bus |  |
| CMM 351 <br> (p. 142) | Public Speaking |  |
| CMM 352 (p. 142) | Persuasion |  |
| CMM 413 (p. 142) | Comm in Infrmtn Age |  |
| CMM 420 (p. 142) | Comm \& Conflict Mgt |  |
| CMM 498 <br> (p. 142) | Communicatn Intrnshp |  |
| Communication Studies (CSS) |  |  |
| Select nine courses from CMM or THR ${ }^{\text {2,3 }}$ |  | 18 |
| Electronic Media (RTV) |  |  |
| CMM 430 <br> (p. 142) | Copyediting | 3 |
| CMM 343 <br> (p. 142) | Scriptwrtng-Elec Med | 3 |
| CMM 397 (p. 142) | Communcatn Practicum ${ }^{4}$ | 1-3 |
| Select one course from: |  | 3 |
| CMM 341 (p. 142) | Audio Production |  |
| CMM 342 <br> (p. 142) | Fund-Video Productn |  |
| CMM 344 (p. 142) | Multimda Dsgn/Prd I |  |
| Select two courses from: |  | 6 |
| CMM 345 <br> (p. 142) | Class Amer Film |  |
| CMM 440 <br> (p. 142) | Broadcast News |  |
| CMM 442 <br> (p. 142) | Adv Television Prod |  |
| CMM 444 <br> (p. 142) | Multmedia Dsn\&Prd II |  |
| CMM 446 <br> (p. 142) | Electronic Media Mgt |  |
| CMM 449 (p. 142) | Top-Electronic Media |  |
| CMM 498 (p. 142) | Communicatn Intrnshp |  |
| CMS 414 <br> (p. 142) | Global Communication |  |
| Journalism (JRN) |  |  |
| CMM 331 (p. 142) | Feature Writing | 3 |
| $\begin{aligned} & \text { CMM } 430 \\ & \text { (p. 142) } \end{aligned}$ | Copyediting | 3 |


| CMM 431 (p. 142) | Public Affairs Reporting | 3 |
| :---: | :---: | :---: |
| CMM 432 <br> (p. 142) | Law \& News Media | 3 |
| Select two courses from: |  | 6 |
| CMM 332 <br> (p. 142) | Publication Design |  |
| CMM 333 <br> (p. 142) | Free Lance Writing |  |
| CMM 334 <br> (p. 142) | Sportswriting |  |
| CMM 412 <br> (p. 142) | Statistcl Mthd-Comm |  |
| CMM 416 <br> (p. 142) | Devlpmnt-Mass Media |  |
| CMM 439 <br> (p. 142) | Spec Topics-Journlsm |  |
| CMM 498 <br> (p. 142) | Communicatn Intrnshp |  |
| CMS 414 <br> (p. 142) | Global Communication |  |
| Public Relations (PUB) |  |  |
| CMM 360 (p. 142) | Prin of Pub Reltns | 3 |
| CMM 412 <br> (p. 142) | Statistcl Mthd-Comm | 3 |
| CMM 460 <br> (p. 142) | Public Rel Writing | 3 |
| CMM 461 <br> (p. 142) | Pub Rel Campaigns | 3 |
| Select two courses from: |  | 6 |
| CMM 331 <br> (p. 142) | Feature Writing |  |
| CMM 332 <br> (p. 142) | Publication Design |  |
| CMM 421 <br> (p. 142) | Commnctn-Organztns |  |
| CMM 430 <br> (p. 142) | Copyediting |  |
| CMM 469 <br> (p. 142) | Spe Top-Pub Relatns |  |
| CMM 498 <br> (p. 142) | Communicatn Intrnshp |  |
| Theatre (CTR) |  |  |
| $\begin{aligned} & \text { THR } 203 \\ & \text { (p. 142) } \end{aligned}$ | Technical Productn | 3 |
| $\begin{aligned} & \text { THR } 310 \\ & \text { (p. 142) } \end{aligned}$ | Acting I | 3 |
| $\begin{aligned} & \text { THR } 340 \\ & \text { (p. 142) } \end{aligned}$ | Director-Theatre | 3 |
| THR 415 (p. 142) | Hst of the Theatre I | 3 |
| Select two courses from: |  | 6 |
| $\begin{aligned} & \text { THR } 305 \\ & \text { (p. 142) } \end{aligned}$ | Theatre Stagecraft |  |


| THR 307 | Theatre Lighting |
| :--- | :--- |
| (p. 142) |  |
| THR 323 | Acting II |
| (p. 142) |  |
| THR 325 | Thry\&Crtcsm Stage: I |
| (p. 142) |  |
| THR 326 | Thry\&Crtcsm stage:II |
| (p. 142) |  |
| THR 330 | Concepts Scene Desgn |
| (p. 142) |  |
| THR 424 | Play Directing |
| (p. 142) |  |

## Breadth

| ASI $150 \quad$ Intr to the Univ Exp | 1 |
| :--- | ---: |
| (p. 142) |  |
| Supporting Area of Study ${ }^{5}$ | 12 |
| Total Hours to total at least | 124 |

1 At least twenty-four of the required thirty-nine semester hours in all communication concentrations must be 300-400 level. No more than six total semester hours of CMM 390 (p. 142), CMM 397 (p. 142) and CMM 498 (p. 142) may be applied toward the thirtynine semester hour requirement.
2 Approved program of study by advisor and department chair must be submitted prior to completion of eighteen semester hours.
3 Dance courses in the theatre program: THR 201 (p. 142), THR 251 (p. 142), THR 261 (p. 142), THR 271 (p. 142), THR 301 (p. 142), THR 351 (p. 142), THR 361 (p. 142), THR 371 (p. 142) do not count toward the thirty-nine semester hour requirement.
4 Flyer TV or WUDR.
5 Twelve semester hours from one discipline or approved minor or area of study: (at least six semester hours at the 300/400 level)

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## Minor in Communication (CMM)

## Communication

| CMM 110 | Group Dec-Making | 1 |
| :--- | :--- | ---: |
| (p. 142) |  |  |
| CMM 111 <br> (p. 142) | Inform Public Sp |  |
| or CMM 112 <br> (p. 142) | Persuasive Public Sp |  |
| CMM 113 Interviewing <br> (p. 142)  |  |  |
| Select four CMM courses $(300 / 400 \text {-level })^{1}$ 1 <br> Total Hours  | 12 |  |

1 In consultation with the chairperson.
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## Minor in Political Journalism (POJ)

Political Journalism ${ }^{1}$

| CMM 201 | Foun-Mass Communcatn | 3 |
| :--- | :--- | :---: |
| $($ p. 142) |  |  |
| CMM 330 | Media Writing | 3 |
| (p. 142) |  | 12 |

CMM $331 \quad$ Feature Writing
(p. 142)

CMM 354 Pol Campaign Comm
(p. 142)

CMM 355
Rhetoric-Soc Movements
(p. 142)

CMM $431 \quad$ Public Affairs Reporting
(p. 142)

CMM 432 Law \& News Media
(p. 142)

Total Hours

1 Available only to political science majors.

## Communication/Social Sciences Courses

## CMS 316. Intercultural Communication. 3 Hours

Study of interpersonal communication with emphasis on people from different countries and with different cultural backgrounds. Focus on the influence of culture on communication and language, verbal and nonverbal communication similarities and differences from culture to culture, and challenges of successful intercultural communication.

CMS 414. Global Communication. 3 Hours
Introduction to the main topics in the field of global communication. Emphasis on comparative mass media and current issues in global communication. Will not satisfy humanities requirement.

## CMS 415. Women \& Communication. 3 Hours

Seminar focusing on gender differences in communication, unique aspects to women's communication, and women's rhetoric. Current theory and research examined. Will not satisfy humanities requirement.

## Communication Courses

## CMM 100. Principles of Oral Communication. 3 Hours

Introduces the relationship between communication and democratic life in contemporary and historical contexts. This course examines the importance of communication in achieving mutual understanding and provides the opportunity to demonstrate effective and ethical dialogue. Students learn to structure messages that deliver complex information to non\#experts, effectively advocate a position, and critique the messages of others.

## CMM 110. Group Decision Making. 1 Hour

Communication processes for small decision-making groups. Focus is on the development of general competencies in leadership, group roles, conflict management, agenda setting, problem analysis and research, decision making and critical thinking.

## CMM 111. Informative Public Speaking. 1 Hour

Communication processes for presenting information in a public speaking context. Focus is on the development of general competencies in development and organization of ideas, research, adaptation to an audience, use of PowerPoint, and delivery.

## CMM 112. Persuasive Public Speaking. 1 Hour

Communication processes for persuading listeners in a public speaking context. Focus is on the development of general competencies in the construction and organization of persuasive strategies, critical evaluation of arguments and evidence, research, adaptation to an audience, use of PowerPoint, and delivery.
CMM 113. Interviewing. 1 Hour
Communication processes for information gathering and employment interviewing. Focus is on the development of general competencies in the conduct and organization of interviews, preparation of resumes, evaluation of questions and responses, research, listening, and nonverbal communication.

## CMM 201. Foundations of Mass Communication. 3 Hours

Historical development of mass media in America; survey of mass media theories, impact of mass media on people and society, the role and influence of the news media, new technologies, programming, and pressure groups.

## CMM 202. Foundations of Communication Theories \& Research. 3 Hours

Study of the nature and scope of communication theories and research. Examination of how the communication discipline developed from classical traditions to its modern perspective.

## CMM 311. Studies in Oral Performance. 3 Hours

Oral performance of poetry, prose, and drama; combining study of vocal modulations, pitch, inflection, and tone color with intellectual and emotional analysis of selections as a means of making the literature alive and immediately present.

## CMM 313. Nonverbal Communication. 3 Hours

Survey of theory and research in nonverbal behavior. Examination of the influence of environmental factors, physical behavior, and vocal cues on human communication.

## CMM 315. International Mass Media. 3 Hours

Focus on the mass media of a particular foreign country or region of the world. Topics may include media content, use, societal effects and ownership.

## CMM 320. Interpersonal Communication. 3 Hours

Study of communication behavior in a variety of dyadic relationships including acquaintance, friendship, work, romantic, and family. Focus on communicative behavior and communicative processes in relationship development including building trust, managing conflict, negotiating power, and listening empathetically.

## CMM 321. Small Group Communication. 3 Hours

Examination of theory and research related to communicative processes in small, task-oriented groups. Applications include a focus upon decision-making strategies, leadership, conflict management, and cohesion. Prerequisite(s): CMM 110.
CMM 322. Interviewing for Communication \& Business. 3 Hours Analysis of communication in structured dyadic interaction. Emphasis on the following types of interviews: information-gathering, employment, appraisal, and persuasive. Application through role-playing and feedback systems. Prerequisite(s): CMM 113.

## CMM 330. Media Writing. 3 Hours

Developing and practicing writing skills for journalism, public relations, and electronic media. Study and practice of ethics in determining news values, gathering information, and communicating clearly and accurately for mass audiences. AP style emphasized.

## CMM 331. Feature Writing. 3 Hours

Developing and writing nonfiction stories for newspapers and magazines. Story types include personality profile, color, background, consumer, and commentary. Study and practice in journalistic reporting skills and literary writing techniques. Emphasis on content, organization, style, and accuracy. Strong command of AP style necessary. Prerequisite(s): CMM 330.

## CMM 332. Publication Design. 3 Hours

Layout and design of print and electronic publications, including newsletters, brochures, and web-based publications. Instruction in desktop and web publishing software, use of type and illustration, cost appraisal, printing methods.

## CMM 333. Free Lance Writing. 3 Hours

Steps of free-lance publication, from market analysis to query letters to writing and rewriting. Mostly nonfiction, magazine markets, some newspaper and nonfiction book markets.

## CMM 334. Sportswriting. 3 Hours

In addition to game stories, attention is also paid to writing about personalities, legal issues, and financial issues on the interscholastic, intercollegiate, amateur, and professional levels. Strong writing skills and knowledge of journalistic style expected. Prerequisite(s): CMM 330.

## CMM 340. Fundamentals of Broadcasting. 3 Hours

Survey of broadcasting, with emphasis on television and radio networks, programming, regulation, audience measurement, audience effects, and technology. Although attention is given both to the origins and future of the field, contemporary broadcasting is emphasized.

## CMM 341. Audio Production. 3 Hours

Study of the theories, processes, and technologies of audio production practices that can be applied in radio, television, and multimedia production. Exercises in recording of voice, music, and special effects. Course includes the operation of basic studio and field equipment, including analog and basic digital recording and editing.
CMM 342. Fundamentals of Video Production. 3 Hours
Explores the techniques of studio and remote video production. Includes the technical and creative aspects of planning and script preparation, producing, directing, technical directing, graphics, editing, camera, lighting, and sound for a variety of video programs.

## CMM 343. Scriptwriting for Electronic Media. 3 Hours

Study of concrete approaches to and practice with the kinds of writing being done professionally in all program types on television and radio including corporate media writing. Prerequisite(s): CMM 330 or permission of instructor.

## CMM 344. Multimedia Design \& Production I. 3 Hours

Introduction to producing in the interactive media of CD-ROM and other digital formats. Reviews basic object linking and embedding in familiar computer programs such as Word, PowerPoint, and Freelance Graphics. Students build skills in multimedia authoring, using all the fundamental tools of graphics, text, audio, and video.

## CMM 345. Classic American Film. 3-6 Hours

Topics course surveying the artistic evolution of American film. Includes the analysis of styles of producing, scripting, acting, directing, lighting, sound, cinematography, set design and editing through viewing of classic American films and selected international films that have influenced the art of American filmmaking. May be repeated once as topics change.

## CMM 350. Propaganda Analysis. 3 Hours

Examination of major propaganda campaigns in history beginning with Greek democracy. Emphasis on twentieth century propaganda as psychological warfare. Principles of Aristotelean rhetorical theory applied to propaganda analysis.

## CMM 351. Public Speaking. 3 Hours

Oral communication in professional situations. Adaptation of principles of effective speaking to specific audiences and occasions. Delivery of informational, problem-solving, and special-occasion speeches. Prerequisite(s): CMM 111 or CMM 112.

## CMM 352. Persuasion. 3 Hours

Study of the use of communication to form attitudes. Examination of attitudes and social influence and their effects on human behavior. Topics include selected theories of persuasion, argument construction, and practical application.

## CMM 354. Political Campaign Communication. 3 Hours

Examination of theory and research on the role, processes and effects of communication in political campaigns with emphasis on mass media, public speaking, debates, advertising, and interpersonal communications.

## CMM 355. Rhetoric of Social Movements. 3 Hours

Study of rhetorical communication in American social movements through examination of the strategies, themes and tactics used by agitators and the institutional responses to discourse aimed at social change.

## CMM 360. Principles of Public Relations. 3 Hours

Survey of the field of public relations emphasizing writing and public relations, theoretical implications of the field, the practitioner's role in organization and the community.

## CMM 390. Independent Study. 1-3 Hours

Supervised study involving directed readings, individual research (library, field, or experimental), or projects in the specialized areas of communication. May be repeated for up to six semester hours. Prerequisite(s): Permission of department chairperson.
CMM 397. Communication Practicum. 1-3 Hours
Contracted participation in an approved on-campus communication organization. One semester hour per term to a maximum of three semester hours. Grading Option Two only.

## CMM 410. Family Communication. 3 Hours

Study of the family from a communication perspective, considering the communication processes within the family and the extent to which communication affects and is affected by the family.
CMM 411. Health Communication. 3 Hours
Examination of communication theory and research as they relate to health care. Issues include reassurance, the role of the patient, interviews, health organizations, the media and health, compliance, providing explanations, and health care professions frequently neglected.

## CMM 412. Statistical Methods in Communication. 3 Hours

Study of data gathering methods in communication. Practice in sampling, survey methods, questionnaire development, and experimental design. Emphasis on the use of logic to interpret data and to support claims.

## CMM 413. Communication in the Information Age. 3 Hours

Examination of issues related to development, economics, programming, and the future of new mass communication technologies. Prerequisite(s): CMM 201 or permission of instructor.
CMM 416. Development of Mass Media. 3 Hours
History and analysis of the development and interdependence of mass media, print and electronic. Emphasis on its role in political and economic progress of U.S. and attendant responsibility.

CMM 420. Communication \& Conflict Management. 3 Hours Examination of the functions of communication in interpersonal conflict such as marital conflict, role conflict, and organizational conflict. Communicative strategies and tactics for managing conflict.

## CMM 421. Communication in Organizations. 3 Hours

Analysis of message initiation, diffusion, and reception in organizations; analysis of the role of communication in developing productive work relationships, management practices, and organizational cultures.

## CMM 430. Copyediting. 3 Hours

Editing, particularly news copy editing and headline writing. Emphasis on clear and concise wording; proper spelling, grammar, and punctuation; and accuracy. Strong command of AP style necessary. Prerequisite(s): CMM 330.

## CMM 431. Public Affairs Reporting. 3 Hours

Investigative and specialized reporting on matters of public concern. Practice in gathering information from primary and secondary sources, and writing about complex subjects for mass audiences. Prerequisite(s): CMM 330.

## CMM 432. The Law \& News Media. 3 Hours

Exploration of the free press clause of the First Amendment, as defined by the courts and media practice. Study of First Amendment core values and theories. Investigation into law on libel, privacy, censorship, access to information, and copyright, as well as regulation of broadcast, cable and new electonic media. Prerequisite(s): Junior standing.
CMM 439. Special Topics in Journalism. 3-6 Hours
Concentrated study in special areas of journalism. May be repeated with change of topic.

## CMM 440. Broadcast News. 3 Hours

Study of the process and practice of news gathering and writing for radio and television. Course includes research, analysis, writing and editing news and features, as well as legal and ethical concerns of broadcast news. Prerequisite(s): CMM 330, CMM 342.

## CMM 442. Advanced Television Production. 3 Hours

Advanced techniques of both studio and electronic field production and post-production editing for television. Prerequisite(s): CMM 342.

## CMM 444. Multimedia Design \& Producation II. 3 Hours

Advanced level multimedia production emphasizing client-based project generation through a design/production team approach. Focus is on interface design; project planning, script writing, story boarding; digital image, sound and video editing; and the use of authoring software. Prerequisite(s): CMM 344.

## CMM 446. Electronic Media Management. 3 Hours

Survey of the leadership/management roles and responsibilities of broadcasting, cable television and corporate media enterprises. Prerequisite(s): CMM 340.

## CMM 449. Topics in Electronic Media. 3 Hours

Concentrated study in special areas of electronic media production, criticism, and management. May be repeated once with change of topic. Depending on topic, prerequisites may be imposed.

CMM 452. Public Discourse \& Criticism. 3 Hours
Examination of the foundations of the field of communication. Major focus on the development of rhetorical theory with attention to rhetorical analysis and criticism.

## CMM 460. Public Relations Writing. 3 Hours

Study, development and application of public relations strategies. Emphasis on strategically effective, factually accurate and grammatically sound written communications for organizational and mass audiences. Prerequisite(s): CMM 330, CMM 360.

## CMM 461. Public Relations Campaigns. 3 Hours

Students plan and carry out a public relations program for an established professional organization, work out solutions to communication and public relations problems, and prepare written campaign materials and handbooks. Prerequisite(s): CMM 330, CMM 360, CMM 460; senior standing.

## CMM 469. Special Topics in Public Relations. 3 Hours

A concentrated study in specific areas of public relations. Development of specialized projects. May be repeated once with change of topics. Prerequisite(s): CMM 360 or permission of instructor.

## CMM 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## CMM 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Progam in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

CMM 480. Communication Capstone Project \& Presentation. 3 Hours Project and presentation in the scholarship, activity and/or practice related to the major concentration. Students will present their work in a forum appropriate to their concentration.

## CMM 498. Communication Internship. 1-6 Hours

Communication work experience in an approved organization. Student must be in good academic standing. Students are normally limited to a maximum of three semester hours. Under exceptional circumstances, students may petition the department chair for an additional three semester hours if the second internship is at a different organzation and the student can demonstrate that the position offers a unique and significant educational opportunity not available through the first internship. Grading Option Two only. Prerequisite(s): CMM 110, (CMM 111 or CMM 112), CMM 113, CMM 201, CMM 202, CMM 330; permission of department chairperson.
CMM 499. Special Topics in Communication. 3-6 Hours
Concentrated study in specific areas of speech communication. May be repeated once with change of topic.

## Computer Science

Majors:

- Bachelor of Science, Computer Information Systems (p. 147)
- Bachelor of Science, Computer Science (p. 148)

Minors:

- Computer Information Systems (p. 149)
- Computer Science (p. 149)

The Department of Computer Science offers two programs leading to a Bachelor of Science degree in either Computer Science or Computer Information Systems. Both programs require the same introductory core sequence of courses in Computer Science. The main differences between the two programs are in the mathematics and science requirements and in the application emphases.

## Computer Science

Computer Science is the study of algorithms and their implementation as applications (apps). This includes the study of data structures, software design, programming languages, and computer architecture. Each student must take appropriate upper-level electives to ensure depth in at least three of the core subject areas of data structures, software design, programming language concepts and architecture as arranged with the student's advisor.

## Computer Information Systems

This program emphasizes computer science concepts with particular attention to systems analysis and design, and includes a concentration area or minor chosen by the student in consultation with the student's advisor.

These B.S. programs provide a foundation for students to embark on successful careers in a variety of computing disciplines, including software development, system design, database management, artificial intelligence, computer networking, systems programming and systems administration. In addition, graduates will be prepared to pursue graduate study in Computer Science and related disciplines.

Computer Science and Computer Information Systems majors are required to attain grades of C- or better in the following courses: CPS 150, CPS 151 and CPS 350.

A minor in computer science consists of twenty semester hours. A minor in computer information systems consists of twenty-three semester hours.

## Faculty

Mehdi Zargham, Chairperson
Professors Emeriti: Kester, Lang, Winslow
Professor: Sritharan
Associate Professors: Buckley, Courte, Gowda, Perugini
Assistant Professor: Yao
Lecturer: Sanyal

## Bachelor of Science with a major in Computer Information Systems (cis) Minimum 120 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$
HST 103 The West \& the World
REL 103 Introduction to Religioius \& Theological Studies

| PHL 103 Introduction to Philosophy |  |
| :---: | :---: |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

| Major Requirements |  | 57 |
| :---: | :---: | :---: |
| CPS 150 <br> (p. 147) | Algorthm\&Progrm I (Applies to CAP Natural Science) | 4 |
| $\begin{aligned} & \text { CPS } 151 \\ & \text { (p. 147) } \end{aligned}$ | Algorthm\&Progrm II | 4 |
| CPS 242 <br> (p. 147) | User Interface Desgn | 3 |
| $\begin{aligned} & \text { CPS } 250 \\ & \text { (p. 147) } \end{aligned}$ | Intro-Comptr Org | 3 |
| $\begin{aligned} & \text { CPS } 310 \\ & \text { (p. 147) } \end{aligned}$ | Systems Analysis | 3 |
| CPS 312 <br> (p. 147) | Systems Design | 3 |
| CPS 341 <br> (p. 147) | Discrete Structures | 3 |
| CPS 346 <br> (p. 147) | Operating Systems I | 3 |
| $\begin{aligned} & \text { CPS } 350 \\ & \text { (p. 147) } \end{aligned}$ | Data Struct\&Algorthm | 3 |
| $\begin{aligned} & \text { CPS } 490 \\ & \text { (p. 147) } \end{aligned}$ | Senior Capstone (Satisfies CAP Major Capstone) | 1 |
| Select four CPS courses (310 level or above) |  | 12 |
| Concentration: courses below or an approved minor |  | 15-2 |
| ACC 207 <br> (p. 147) | Intro-Financial Acc |  |
| ACC 208 <br> (p. 147) | Intro-Managerial Acc |  |


| ECO 203 | Prin of Microecon |
| :--- | :--- |
| (p. 147) |  |
| ECO 204 | Prin of Macroecon |
| (p. 147) |  |
| MGT 301 | Organiztnl Behavior |
| $\left.\begin{array}{ll}\text { (p. 147) } & \\ \text { MKT 300 } & \text { Survey of MKT } \\ \text { (p. 147) } & \\ \hline\end{array}\right)$. |  |

## Bachelor of Science with a major in Computer Science (cps) Minimum 120 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |

## ENG 200 Writing Seminar II

Oral Communication 3

CMM 100 Principles of Oral Communication
Mathematics 3
Social Science ..... 3
Arts ..... 3
Natural Sciences ..... 7
Crossing Boundaries ..... variablecreditFaith TraditionsPractical Ethical Action

Inquiry Integrative
Advanced Study variablecredit
Philosophy and/or Religious StudiesHistorical Studies
Diversity and Social Justice ..... 3
Major Capstone ..... 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.
Major Requirements ..... 45
CPS 150 Algorthm\&Progrm I (Applies to CAP Natural ..... 4
(p. 147) Science)
CPS 151 Algorthm\&Progrm II 4
CPS 242 User Interface Desgn 3
(p. 147)

CPS $250 \quad$ Intro-Comptr Org3

| CPS 341 <br> (p. 147) | Discrete Structures | 3 |
| :---: | :---: | :---: |
| CPS 346 <br> (p. 147) | Operating Systems I | 3 |
| $\begin{aligned} & \text { CPS } 350 \\ & \text { (p. 147) } \end{aligned}$ | Data Struct\&Algorthm | 3 |
| CPS 387 <br> (p. 147) | Comp System Desgn I | 3 |
| CPS 490 <br> (p. 147) | Senior Capstone (Satisfies CAP Major Capstone) | 1 |
| Select six CPS courses (300/400 level) ${ }^{3}$ |  | 18 |

## Minor in Computer Information Systems (cis)

| Computer Information Systems |  |  |
| :--- | :--- | ---: |
| CPS 150 | Algorthm\&Progrm I | 4 |
| (p. 147) |  | 4 |
| CPS 151 <br> (p. 147) | Algorthm\&Progrm II |  |
| CPS 242 | User Interface Desgn | 3 |
| (p. 147) |  |  |
| CPS 310 <br> (p. 147) | Systems Analysis | 3 |
| CPS 312 <br> (p. 147) | Systems Design | 3 |
| Select two CPS courses (320 level or above) |  |  |
| Total Hours |  | 23 |

## Minor in Computer Science (cps)

## Computer Science

| CPS 150 | Algorthm\&Progrm I | 4 |
| :--- | :--- | ---: |
| (p. 147) |  |  |
| CPS 151 | Algorthm\&Progrm II | 4 |
| (p. 147) |  | 3 |
| CPS 350 <br> (p. 147) | Data Struct\&Algorthm |  |
| Select three CPS courses (320 level or above, excluding CPS 437) | 9 |  |
| Total Hours | 20 |  |

## Courses

CPS 107. Introduction to Computer Science. 3 Hours
An introduction to the field of Computer Science, covering computers and society, the internals and externals of computer hardware and software, as well as some exposure to advanced topics of artificial intelligence, computer forensics, and databases. Intended for science and engineering students.

CPS 111. Introduction to Personal Computers. 3 Hours
Emphasis on use of operating system, particularly file organization, and applications: word processor, spreadsheet, database and presentation software.

## CPS 132. Computer Programming for Engineering \& Science. 3 Hours

Fundamentals of computer programming including algorithms, program structure, library routines, debugging, and program verification. Calculusbased computer solutions of problems from science and engineering using C++. Corequisite(s): MTH 168.
CPS 144. Introduction to Computer Programming. 3 Hours Fundamentals of computer programming including algorithms, program structure, library routines, debugging, and program verification. Computer solutions of problems from social sciences using a suitable compiler language such as Visual Basic.

## CPS 150. Algorithms \& Programming I. 4 Hours

Algorithms, programs, and computers. Algorithm development, basic programming and programming structure. Debugging and program verification. Data representation. Computer solutions to numeric and nonnumeric problems using a compiler language.
CPS 151. Algorithms \& Programming II. 4 Hours
Continuation of CPS 150. Emphasis on program design, development and style, string processing, data structures, program modularity, and abstract data type, using a compiler language. Prerequisite(s): CPS 150.

## CPS 242. User Interface Design. 3 Hours

The importance and challenges of user interface design in software development are discussed and Graphical User Interfaces (GUI) are developed using an appropriate programming language. Reading assignments cover interface design issues and programming assignments focus on event-driven programming, exception handling, GUI development, web and multi-media applications, and data persistence. Prerequisite(s): CPS 151.
CPS 250. Introduction to Computer Organization. 3 Hours Computer organization and architecture are studied from a software perspective. Data representation, program translation and execution are examined in the context of the classic von Neumann architecture. Programming projects involving both a higher-level language and an assembly language reinforce the architecture concepts. Prerequisite(s): CPS 151.

CPS 309. Topics in Computer Science. 1-4 Hours
Lectures or laboratory work in areas of current interest. May be taken more than once. Does not count as upper level credit for majors/minors.

## CPS 310. Systems Analysis. 3 Hours

Methodologies for producing software, software development life cycles, top-down approach, data flow diagram, data dictionary, minispecifications, in/output design, E-R diagrams, normalization, introduction to object oriented analysis. Prerequisite(s): CPS 151 or CPS 225.

## CPS 312. Systems Design. 3 Hours

Structured design, tools of structured design, coupling and cohesion of modules, transform and transaction analyses, packaging, optimization, data-oriented and object oriented design methodologies, automated design tools. Prerequisite(s): CPS 310.

CPS 341. Discrete Structures. 3 Hours
Logic and proofs, sets and counting, Boolean algebra, graph theory, directed graphs, mathematical machines, formal languages and grammars. Prerequisite(s): CPS 150.
CPS 343. Comparative Languages. 3 Hours
Language design issues, formal syntax specification, data types and storage methods, activation records and procedural object oriented, functional, and logic programming paradigms. Prerequisite(s): CPS 350.

## CPS 346. Operating Systems I. 3 Hours

Semaphores, conditions, monitors, and kernels. Concurrent programming, interrupts, memory, and process management. Design and implementation of multithreaded and distributed system components using concurrent languages. Prerequisite(s): CPS 250, CPS 350.

## CPS 350. Data Structures \& Algorithms. 3 Hours

Advanced concepts of linear data structures, stacks, queues, and abstract data types. Basic and advanced concepts of trees, graphs, hash tables, heaps, algorithm design and analysis techniques. Prerequisite(s): CPS 151.

## CPS 353. Numerical Methods I. 3 Hours

Study of the algorithms of numerical mathematics with emphasis on interpolation, the solution of nonlinear equations, and linear systems of equations including matrix methods; analysis of errors associated with the algorithms. Prerequisite(s): (CPS 132 or CPS 150); MTH 169.

## CPS 387. Computer System Design I. 3 Hours

Study of the elements of computer design. Design of combinatorial and sequential logic circuits using current integrated circuit devices. Discussion of encoders, decoders, registers, counters, etc. as applied to design and use of control, arithmetic, logic, and storage units. Instruction set, addressing modes and CPU design. Laboratory experiments with these devices. Prerequisite(s): CPS 250, CPS 341.

## CPS 415. Software Testing. 3 Hours

Detailed examination of the software testing process and its role in the software lifecycle. Topics include functional testing, structural testing, methods for designing, generating and evaluating test data, coverage hierarchies, theoretical and practical limitations of testing, testability measures, regression testing, and specialized testing such as methods for testing object oriented software, graphical user interfaces. Prerequisite(s): (CPS 310 or CPS 418); CPS 341, CPS 350.
CPS 420. Object Oriented Systems Development. 3 Hours
An overview of object-oriented analysis and design methodologies and Unified Modeling Language (UML), Use Case Model, Logical Model, Component Model, Deployment Model and Design Patterns. The course will involve a team project using a state-of-the-art Computer Aided Software Engineering (CASE) tool. Prerequisite(s): CPS 310, CPS 350.

## CPS 422. Software Project Management. 3 Hours

An overview of software project management tasks, software development methodologies, project planning techniques, algorithimic cost estimation models, Function Point Estimation, risk management, prototyping, management of software reuse, software maintenance, quality assurance, configuration management, Capability Maturity Model (CMM), and evaluation of CASE tools. Prerequisite(s): CPS 310 or CPS 418.

## CPS 424. Discrete Event Simulation Techniques. 3 Hours

Design and use of simulation models; study and use of special-purpose simulation languages such as GPSS and GASP IV, SIMSCRIPT II.5. Applications. Prerequisite(s): CPS 151.

## CPS 430. Database Management Systems. 3 Hours

Physical and logical organization of databases: the entity-relationship model; relational database model; the data definition and data manipulation language of a commercial database management system; integrity constraints; conceptual database design. Prerequisite(s): CPS 350.

CPS 432. Database Management Systems II. 3 Hours
Study of query execution and optimization, transaction management, concurrency control, recovery and security techniques. Advanced data models and emerging trends in database systems, like object oriented database systems, distributed database systems, the clientserver architecture, multidatabase and heterogeneous systems. Other current database topics and emerging technologies will be discussed. Prerequisite(s): CPS 430.

## CPS 437. System Architectures \& Networking. 3 Hours

Issues and techniques used in the physical design of computer-based information systems. Basic operating systems, hardware architecture and networking prinicples. Intended for students majoring in MIS; not open to students majoring in CPS, CIS, or PCS. Prerequisite(s): MIS 380, MIS 385.

## CPS 444. Systems Programming I. 3 Hours

Analysis of compilers and their construction; programming techniques discussed in the current literature; advanced computer applications in mathematical and nonnumeric areas. Prerequisite(s): CPS 346, CPS 350.

## CPS 460. Computer Graphics. 3 Hours

Introduction to graphics devices and software graphic primitives (points, lines, characters), two-dimensional transformations, clipping, survey of display devices and methods. Graphic input devices, representation of curves and surface in space. Prerequisite(s): CPS 350.

## CPS 470. Data Communications. 3 Hours

Basic hardware and software architectural components for computer communications. Analysis of communication protocol layers with respect to performance, error handling and control functions. Switching, routing, multiprocessing and distributed processing. Case studies of existing networks and network architectures. Prerequisite(s): CPS 350.

## CPS 472. Computer Networking. 3 Hours

Continuation of CPS 470. Concepts and analysis of computer networks. Network applications, security and network management. Network topologies and case studies. Prerequisite(s): CPS 346, CPS 470.

## CPS 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## CPS 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## CPS 480. Artificial Intelligence. 3 Hours

Basic concepts and techniques of intelligent systems. Emphasis on representations, problem solving, search strategies, expert systems, mVgic systems, and AI programming. Design and implementation of AI applications. Prerequisite(s): CPS 350.

## CPS 481. Advanced Artificial Intelligence. 3 Hours

An examination of several advanced sub-disciplines of Artificial Intelligence including areas such as speech recognition, planning, machine learning, advanced multiple agent systems and related topics. An exploration of underlying theoretical issues as well as the status of current problems and applications. Prerequisite(s): CPS 480.
CPS 482. Automata Theory. 3 Hours
Finite automata, sequential machines, survey of formal languages, introduction to computability, recursive functions, and Turing machines. Prerequisite(s): CPS 341.
CPS 490. Senior Capstone Project \& Presentation. 1 Hour
Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

## CPS 496. Cooperative Education. 1-3 Hours

Computer science cooperative education work experience in an approved organization. Not open to students with credit in CPS 497. Credit does not apply to major requirements. Repeat to a maximum of three semester hours. Prerequisite(s): Twelve hours of upper-level CPS courses with a GPA of 3.0; total ninety semester hours with a GPA of 2.75 ; permission of the department in advance of the work.

## CPS 497. Internship. 1-3 Hours

Computer science work experience in an approved organization. Not open to students with CPS 496 credit. Credit does not apply to major requirements. Repeat to a maximum of three semester hours. Prerequisite(s): Twelve semester hours of upper-level CPS courses with GPA of 3.0; total ninely semester hours and 2.75 GPA; permission of department in advance of the work.

## CPS 498. Problems in Computer Science. 1-4 Hours

Individual readings and research in a specialized area. (See CPS 499.) By arrangement. May be taken more than once for additional credit. Prerequisite(s): Permission of department chairperson.

CPS 499. Special Topics in Computer Science. 1-4 Hours Lectures or laboratory work in such areas as advanced artificial intelligence, computer architecture, information retrieval, microprogramming, multiprogramming techniques, numerical analysis, graphics, data communications, parallel processing, software development, distributed computing, multimedia computing. By arrangement. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## Criminal Justice Studies

Major:

- Bachelor of Arts, Criminal Justice (p. 151)

Minor:

- Criminal Justice (p. 154)

Criminal Justice is the scientific study of crime, deviance, and the agencies of the criminal justice system. The Bachelor of Arts with a major in criminal justice studies, is a broadly structured interdisciplinary and criminological curriculum designed to introduce students to:

1. A critical theory of criminal justice/criminology and
2. Requisite knowledge for public service, e.g., law enforcement and/or investigative services at the local, state and national levels; careers in the correctional field, community programs, and other rehabilitative services, as well as staff positions in the judiciary system; and
3. Preparation for pursuing advanced study in a criminological graduate program or law school.

In addition to courses in criminal justice studies, students take courses in political science, psychology, sociology, and social work.

Those who enter the University of Dayton as first-year students, or as transfers without associate degrees, will be classified under Option A, a total program sequence. Students who transfer here with acceptable associate degrees in specific fields similar or closely related to criminal justice will be classified under Option B, a transfer program sequence. All students transferring into the curriculum must be in good academic standing and meet entry requirements.

A minor in criminal justice studies consists of eighteen semester hours.
Students intending to major or minor in CJS should consult with the program director to begin planning their CJS program. It is the sole responsibility of students to inform themselves of whatever changes occur in the curriculum and to observe all the regulations, procedures, and requirements of the University and the criminal justice studies program. The Criminal Justice Studies Program is a part of the Department of Sociology, Anthropology, and Social Work.

## Criminal Justice Committee

Arthur J. Jipson, Director
Additional faculty who teach in the Criminal Justice Studies Program are located in several social science departments including: Sociology, Anthropology, and Social Work; Psychology; and Political Science. Faculty who teach in the program: Apolito (Criminal Justice Studies/ Sociology), Becker (Sociology), Berry (Psychology), Cassiman (Social Work), Davis-Berman (Social Work), Donnelly (Sociology), Forbis (Sociology), Ghere (Political Science), Ingram (Political Science), Longazel (Sociology), Majka, L. (Sociology), Majka, T. (Sociology), Martorano Miller (Political Science), Neeley (Political Science), Pierce (Political Science), Reeb (Psychology), Thompson-Miller (Sociology)

## Bachelor of Arts with a major in Criminal Justice Studies-Option A (cjs) Minimum 124 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$
HST 103 The West \& the World
REL 103 Introduction to Religioius \& Theological Studies
PHL 103 Introduction to Philosophy
ENG 100 Writing Seminar I ${ }^{2}$
Second-Year Writing Seminar ${ }^{3} \quad 0-3$

ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable

| Faith Traditions |  |
| :--- | ---: |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |
| Advanced Study |  |
| Philosophy and/or Religious Studies | 3 |
| Historical Studies | $0-3$ |
| Diversity and Social Justice |  |
| Major Capstone |  |
| 2 | Completed with ASI 110 and ASI 120. |
| 3 | Completed with ENG 200H or ASI 120. |


| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) ${ }^{1}$ |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{2,3}$ |  | 37 |
| CJS 101 <br> (p. 151) | Intro to CJS | 3-4 |
| $\begin{aligned} & \text { CJS } 207 \\ & \text { (p. 151) } \end{aligned}$ | Resrch Mthds in CJS ${ }^{1,4}$ | 3 |
| $\begin{aligned} & \text { CJS } 347 \\ & \text { (p. 151) } \end{aligned}$ | Sr Project Design | 1 |
| $\begin{aligned} & \text { CJS } 447 \\ & (\text { p. 151) } \end{aligned}$ | Senior Project-CJS (Satisfies CAP Major Capstone) | 3 |
| $\begin{aligned} & \text { SOC } 305 \\ & (\text { p. 151) } \end{aligned}$ | Criminological Thry | 3 |

Select two behavior courses from: 6

| PSY 363 | Abnormal Psychology |
| :--- | :--- |
| (p. 151) |  |
| PSY 461 | Curr Impl-Drug Depnd |
| (p. 151) |  |
| SOC 325 | Deviant Behavior |
| (p. 151) |  |
| SOC 327 Criminology <br> (p. 151)  <br> SOC 410 Victimology <br> (p. 151)  <br> SWK 325 Child Abuse <br> (p. 151)  <br> Select two institutions courses from: 6 |  |


| CJS 303 | Corrections |
| :--- | :--- |
| (p. 151) |  |
| POL 303 | State \& Local Govt |
| (p. 151) |  |
| POL 305 Intro To Public Adm <br> (p. 151)  |  |


| $\begin{aligned} & \text { POL } 360 \\ & \text { (p. 151) } \end{aligned}$ | Urban Politics |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { SOC } 323 \\ & \text { (p. 151) } \end{aligned}$ | Juvenile Justice |  |
| SWK 305 <br> (p. 151) | Soc Ser Health Field |  |
| Select two law courses from: |  | 6 |
| CJS 305 <br> (p. 151) | Criminal Law |  |
| CJS 315 <br> (p. 151) | Criminal Procedure |  |
| $\begin{aligned} & \text { POL } 301 \\ & \text { (p. 151) } \end{aligned}$ | Amer Judicl Process |  |
| $\begin{aligned} & \text { POL } 411 \\ & (\text { p. 151) } \end{aligned}$ | Constitutional Law |  |
| $\begin{aligned} & \text { POL } 450 \\ & \text { (p. 151) } \end{aligned}$ | Civil Liberties |  |
| $\begin{aligned} & \text { SOC } 326 \\ & (\text { p. 151) } \end{aligned}$ | Law \& Society |  |
| Select two social structure courses from: |  | 6 |
| $\begin{aligned} & \text { CJS } 322 \\ & \text { (p. 151) } \end{aligned}$ | Policing \& Society |  |
| $\begin{aligned} & \text { CJS } 336 \\ & \text { (p. 151) } \end{aligned}$ | Comp Crim Jus Systms |  |
| $\begin{aligned} & \text { SOC } 328 \\ & \text { (p. 151) } \end{aligned}$ | Racial\&Eth Minorties |  |
| $\begin{aligned} & \text { SOC } 339 \\ & \text { (p. 151) } \end{aligned}$ | Social Inequality |  |
| $\begin{aligned} & \text { SOC } 351 \\ & \text { (p. 151) } \end{aligned}$ | Urban Sociology |  |
| Breadth |  |  |
| $\begin{aligned} & \text { ASI } 150 \\ & \text { (p. 151) } \end{aligned}$ | Intr to the Univ Exp | 1 |

1 CJS 207 (p. 151), Research Methods in Criminal Justice Studies, requires as a prerequisite MTH 207 (p. 151) or PSY 216 (p. 151) or SOC 308 (p. 151). Neither PSY 216 (p. 151) nor SOC 308 (p. 151) fills the three semester hours mathematics requirement for graduation
2 Internships and independent studies may be taken in CJS, POL, PSY, and SOC that have a Criminal Justice Studies emphasis. No more than six semester hours of internships may be taken. Also to be offered is CJS 300 (p. 151) Criminal Justice Studies Career Development, CJS 399 (p. 151), Special Topics in Criminal Justice Studies and CJS 497 (p. 151), Service Learning Experience. This course work is in addition to the thirty-six hours required for a CJS interdisciplinary major in the Option A, total program sequence. They are not to be used as substitute courses for those listed in the areas of behavior, institutions, law and/or social structure, unless approved in advanced by the director of the Criminal Justice Studies program and the College of Arts and Sciences.
3 May include CAP components.
4 May substitute SOC 208 (p. 151), POL 207 (p. 151), or PSY 217 (p. 151).

## Bachelor of Arts with a major in Criminal Justice Studies-Option B (cjs) Minimum 124 Hours



| ENG 370 | Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) |
| :--- | :--- |
| (p. 151) | 3 |
| or ENG 372 | Business Commicatn |
| (p. 151)  <br> or ENG 474 Argument and Style <br> (p. 151) $\$$. |  |

Total Hours to total at least

1 CJS 207 (p. 151), Research Methods in Criminal Justice Studies, require as a prerequisite MTH 207 (p. 151) or PSY 216 (p. 151) or SOC 308 (p. 151). Neither PSY 216 (p. 151) nor SOC 308 (p. 151) fills the three semester hours mathematics requirements for graduation. May substitute SOC 208 (p. 151), POL 207 (p. 151), PSY 217 (p. 151) for CJS 207 (p. 151).

2 To be admitted as a major in the program under Option B, a transfer student must have received an accredited associate degree in corrections, law enforcement, police administration, police science, or a similar field of criminal justice and must have a 2.5 cumulative grade-point average on a 4.0 grading system. For criminal justice studies majors who have completed the basic requirements for an accredited two-year criminal justice degree, sixty semester hours beyond the associate degree is suggested, which includes a minimum of twenty-one semester hours in the program. The Liberal Studies Curriculum is required for all criminal justice studies transfer majors in addition to the baccalaureate degree requirements if they were not included in the candidates' associate degree programs.
3 Internships and Independent Studies may be taken in CJS, POL, PSY, and SOC that have a criminal justice studies emphasis. No more than six semester hours of internships may be taken. Also to be offered is CJS 300 (p. 151) Criminal Justice Studies Career Development, CJS 399 (p. 151), Special Topics in Criminal Justice Studies and CJS 497 (p. 151), Service Learning Experience. This course work is in addition to the hours required for a CJS interdisciplinary major in the Option B, transfer program sequence. They are not to be used as substitute courses for those listed in the areas of behavior, institutions, law and/or social structure, unless approved in advance by the director of the Criminal Justice Studies program and the College of Arts and Sciences.
4 To be considered a viable candidate for graduation, a student must have completed a minimum of 124 semester hours with accepted transfer credits.
5 May include CAP components.

## Minor in Criminal Justice Studies (cjs)

## Criminal Justice Studies

| CJS 101 | Intro to CJS | $3-4$ |
| :--- | :--- | :---: |
| (p. 151) |  |  |
| SOC 305 <br> (p. 151) | Criminological Thry | 3 |
| ${\text { Select four CJS courses }(300 / 400 \text { level })^{1}}$ | 12 |  |

Total Hours

1 One course from each of the four areas involving behavior, institutions, law, and social structure.

## Courses

CJS 101. Introduction to Criminal Justice Studies. 3-4 Hours
Introduction to the field of criminal justice studies, stressing the theoretical foundations, origin, nature, methods, and limitations of criminal justice studies as a college curriculum.

CJS 207. Research Methods in Criminal Justice Studies. 3 Hours Review of the nature, language, and processes of inquiry involving experiments, studies, surveys, and investigations. The instrumentation, types, and structures of content analysis, questionnaires, interviews, and structured observation, including, analytic techniques, data processing resources, and preparation of research reports are also examined. Prerequisite(s): MTH 207 or PSY 216 or SOC 308.

CJS 300. Criminal Justice Studies Career Development. 1 Hour Exploration of career opportunities and the professional career placement process including setting goals and identifying educational objectives, noting professional concerns, the role of a given criminal justice organization, and assessing experiences.

## CJS 303. Corrections. 3 Hours

The administration of correctional institutions and other detention facilities with emphasis on probation and parole systems to include the rehabilitation and treatment of the incarcerated with reference to correctional law cases.

## CJS 305. Criminal Law. 3 Hours

Principles of criminal liability, preparation of case materials, court procedures, and case disposition.

## CJS 315. Criminal Procedure. 3 Hours

Fundamentals of criminal procedure: arrest, search, and seizure; interrogation, constitutional limitations upon state and federal rules of criminal procedure. Prerequisite(s): A course in criminal law.

## CJS 322. Policing \& Society. 3 Hours

Analyzes the history of policing in society and assesses the social and political forces that are correlated with both the rise of formal policing and the variety of structures law enforcement agencies have assumed. Reviews the primary functions of policing in American society and examines those issues affecting federal, state, county, municipal and private policing.

## CJS 336. Comparative Criminal Justice Systems. 3 Hours

 Survey of cross-cultural uniformities and diversities in law-enforcement agencies, correctional systems, and the courts in selected countries. Prerequisite(s): An introductory course in criminal justice.
## CJS 347. Senior Project Design. 1 Hour

Preparation for the criminal justice capstone course with a focus on a workable research topic, literature review, and research methods design. Required for Criminal Justice majors. Prerequisites: SOC 208 or POL 207 or PSY 217; SOC 305 (may be taken as a corequisite).

CJS 399. Special Topics in Criminal Justice Studies. 1-3 Hours
An extensive examination of a current topic affecting the criminal justice system and its law enforcement, corrections or judicial components. May be repeated to a maximum of three semester hours when the topic changes.

## CJS 440. Independent Study. 3 Hours

Directed study and research on selected topics of significant academic publications in law enforcement and criminal justice. Prerequisite(s): An introductory CJS course; permission of instructor.

CJS 447. Senior Seminar in Criminal Justice Studies. 3 Hours
Capstone experience in criminal justice studies consisting of a seminar on research and writing in criminology and criminal justice, an empirical research project of the student's choosing, and a written and oral presentation of the research.

## CJS 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## CJS 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved CJS 477; approval of University Honors Program.

## CJS 495. Internship in Criminal Justice I. 1-3 Hours

Supervised experience solely in a civilian capacity in a criminal justice or law-enforcement agency. Open to pre-service criminal justice studies majors only; in-service students do not qualify. Students who enroll for internship credit are not given a stipend. Credit granted only under Grading Option Two. Prerequisite(s): 2.5 cumulative grade-point average; sophomore status; permission of program director.
CJS 496. Internship in Criminal Justice II. 1-3 Hours
Continuation of CJS 495.
CJS 497. Service Learning Experience. 1 Hour
Supervised community research or service experience that complements a specific upper division course in Criminal Justice Studies. No more than three semester hours of Social Science 497 credits can count for graduation. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): CJS course (300- or 400-level).

## Economics

Major:

- Bachelor of Arts, Economics (p. 155)

Minor:

- Economics (p. 156)

In cooperation with the Department of Economics and Finance in the School of Business Administration, the College of Arts and Sciences offers the degree of Bachelor of Arts with a major in economics.

The field of economics covers topics ranging from making sound business decisions to tackling some of society's most challenging social issues. Economics students learn to think critically about how choices are made in the presence of scarcity. An undergraduate education in economics enables individuals to better understand and help resolve problems in today's business and society.

The major in economics requires thirty semester hours of courses in economics: ECO 203, 204, 346, 347, 490, and five elective courses in economics.

A minor in economics is also available, requiring eighteen semester hours of courses in economics: ECO 203, ECO 204, ECO 346, ECO 347 and two elective courses in economics.

Information on a specialized degree, applied mathematical economics, (MTE) is offered by the Department of Mathematics.

Faculty
Trevor Collier, Chairperson
Edmund B. O'Leary Chair in Economics: John Ruggiero
Professors: Caporole, Frasca, Ruggiero
Associate Professors: Collier, Gustafson, Poitras
Lecturer: John

## Bachelor of Arts with a Major in Economics (ECO) Minimum 124 Hours

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religioius \& Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable <br> credit |


| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |
| Integrative |
| Advanced Study |
| Philosophy and/or Religious Studies |
| Historical Studies |
| Diversity and Social Justice |
| Major Capstone |
| 1 |
| Completed with ASI 110 and ASI 120. |

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)


5 Minimum C grade
6 ECO 340 (p. 155) may be substituted for ECO 346 (p. 155) with permission of the department chairperson.

## Minor in Economics (ECO)

## Economics

| $\begin{aligned} & \text { ECO } 203 \\ & \text { (p. 155) } \end{aligned}$ | Prin of Microecon ${ }^{1}$ | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { ECO } 204 \\ & \text { (p. 155) } \end{aligned}$ | Prin of Macroecon ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { ECO } 346 \\ & \text { (p. 155) } \end{aligned}$ | Intrmd MicroEco Anly ${ }^{2}$ | 3 |
| $\begin{aligned} & \text { ECO } 347 \\ & \text { (p. 155) } \end{aligned}$ | Intrmd MacroEco Anly | 3 |
| Select two ECO courses (300/400 level) |  | 6 |
| Total Hour |  | 18 |

1 ECO 300 and an upper level ECO course can substitute for ECO 203 and ECO 204.
2 ECO 340 may be substituted for ECO 346 with permission of department chairperson.

## Courses

## ECO 203. Principles of Microeconomics. 3 Hours

An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included.

## ECO 204. Principles of Macroeconomics. 3 Hours

Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed.

## ECO 301. Seminar in Market Economics. 3 Hours

Market solutions to economic and political issues. Topics vary, but may include issues relating to drugs, gun control, environmental concerns, government interventions, economic and political freedom, and others. Team taught course. Prerequisite(s): ECO 203.

ECO 340. Managerial Economics. 3 Hours
Application of economic models to managerial decision making. Topics include demand analysis, forecasting demand, short-run cost analysis, long-run cost and production functions, pricing, and risk and uncertainty. May not get credit for both ECO 340 and ECO 346. Prerequisite(s): ECO 203.

## ECO 346. Intermediate Microeconomic Analysis. 3 Hours

Analysis of the theory of consumer behavior, production theory, equilibrium of the firm, price determination in various market structures, distribution of income, allocation of resources, and welfare economics.
May not get credit for both ECO 346 and ECO 340. Prerequisite(s): ECO 203.

## ECO 347. Intermediate Macroeconomic Analysis. 3 Hours

National income accounting and the determination of the level of income and employment; classical, Keynesian, and post-Keynesian models; private, government, and foreign sectors; theories of inflation and economic growth. Prerequisite(s): ECO 204; ECO 203 recommended.

## ECO 390. Antitrust Economics. 3 Hours

Study of how economic analysis has been applied in the interpretation of the antitrust statutes. Examines major anti-trust laws and relevant case law; reviews economic theories of market behavior. Prerequisite(s): ECO 203.

## ECO 410. Business \& Economic Forecasting. 3 Hours

Forecasting techniques, including ARIMA time series models, econometric models, moving averages, exponential smoothing, and time series decomposition, are used to forecast business and economic variables. Data sources, selection of appropriate forecasting tools and models, and evaluation of forecast results are studied. Prerequisite(s): ECO 203, ECO 204; Statistics (DSC 211 or MTH 207 or MTH 367 or MTH 412).

## ECO 415. Game Theory with Business Applications. 3 Hours

Introductory course in strategic decision making; provides a thorough discussion of the basic techniques of applied game theory and of systematic thinking in making business decisions. Among the topics covered with applications to business are equilibrium strategies, understanding situations involving conflict and cooperation, auction design and bidding strategy, and bargaining and negotiations. Prerequisite(s): ECO 203.

## ECO 435. Economics of the Environment. 3 Hours

Introduction to the economics of the global environment including an analysis of market failure as a cause of environmental degradation. Topics covered include cost-benefits analysis, criteria for public investment, regulation of the environment, and the sustainable global environment. Prerequisite(s): ECO 203.

## ECO 441. Econometrics. 3 Hours

Training in the art of making economic measurements from empirical data using regression analysis as the principle tool; use of computer software to estimate and test regression equations; interpretation of results using statistical inference. Prerequisite(s): (ECO 203, ECO 204; differential calculus and basic statistics) or permission of instructor.

## ECO 442. Money \& Banking. 3 Hours

Principles of money and monetary systems; commercial banking and the role of the Federal Reserve System; monetary theory and policy; the mechanism of international payments. Prerequisite(s): ECO 203, ECO 204.

## ECO 445. Public Finance. 3 Hours

The economic aspects of government finance at the local, state, and especially the national level; the behavioral effects of various taxes, efficiency in spending, the changing role of the U.S. government, fiscal policy, and intergovernmental revenue and expenditure programs; emphasis on relating analytical tools to current developments.
Prerequisite(s): ECO 203, ECO 204.

## ECO 460. Economic Development \& Growth. 3 Hours

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations. Prerequisite(s): ECO 203, ECO 204.

## ECO 461. International Economics. 3 Hours

Major issues surrounding international trade and finance, the economic interdependence of nations and businesses, essential theoretical and empirical tools necessary to monitor and analyze international economic phenomena, and the application of these tools to contemporary business problems and issues. Prerequisite(s): ECO 203, ECO 204.

## ECO 471. Labor Economics. 3 Hours

Theory of labor supply and demand, human capital theory, and the process by which wages are determined in various factor markets; applications to topics of unemployment, unions, migration, discrimination, and skill differentials. Prerequisite(s): ECO 203, ECO 204.

## ECO 480. Sports Economics. 3 Hours

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry. Prerequisite(s): ECO 203; (DSC 211 or MTH 207) or equivalent.

## ECO 485. Urban \& Regional Economics. 3 Hours

Treatment of certain theoretical concepts such as location theory and theories of land use and land rent; an economic interpretation for the existence of cities; applying economic analysis to the problems of traffic congestion, pollution, race, poverty, and urban sprawl. Prerequisite(s): ECO 203; (DSC 211 or MTH 207); ECO 346 recommended.
ECO 488. Production Economics \& Performance Evaluation. 3 Hours Intermediate course in theoretical and applied microeconomic production theory; provides a thorough discussion of the basic techniques of applied production theory and performance evaluation of decision making units. Topics include returns to scale, technical and allocative efficiency, benchmarking, environmental costs, and programming. Prerequisite(s): ECO 203.

ECO 490. Senior Seminar in Applied Economics. 3 Hours
Economic analysis applied in an area of topical interest chosen by the instructor; includes the application of theoretical, mathematical, and statistical methods mastered in previous economics courses. This capstone course provides students an opportunity to extend their proficiency in economic analysis through application and discussion in a small group setting. Typically offered during the spring semester. Economics or Business Economics majors only. Prerequisite(s): Twelve semester hours in Economics.

## ECO 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## ECO 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## ECO 494. Seminar. 3 Hours

Subject varies from time to time. May be taken more than once if topic changes. Prerequisites to be announced.

## ECO 496. Cooperative Education. 3 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward economics major. Permission of chairperson required. Economics or Business Economics majors only. Prerequisite(s): Permission of department chairperson.

ECO 497. Internship for General Elective Credit. 1-3 Hours
Practical work experience associated with career development and career exploration relating to the student's major. Permission of the department chair or designee required. Does not replace economics courses for the economics major. Economics or Business Economics majors only. Prerequisite(s): Forty-five semester hours of credit.

ECO 498. Independent Study in Economics. 1-6 Hours
Directed readings and research in selected fields of economics. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with faculty and other students in the course. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in economics with a minimum of nine semester hours in economics; nomination by faculty; permission of the department chairperson.

## English

Major:

- Bachelor of Arts, English (p. 158)

Minor:

- English (p. 159)

The University requirement in English composition is satisfied by the completion of (or ENG 100A and ENG 100B), ENG 200 or ENG 200H or ASI 120. Completing this requirement is a prerequisite for most other English courses. For placement information, see Composition Competencies in the Degree Requirementssection. For additional details, consult the department chairperson or the director of writing programs.

Students majoring in English must complete at least thirty-six semester hours of English courses, including first-year composition, and at least twenty-four semester hours at the 300/400 level.

A minor in English consists of twelve semester hours beyond the composition requirement.

Students in B.A. programs can pursue State of Ohio teacher licensing in Integrated Language Arts through the Teacher Licensure Program conducted in conjunction with the Department of Teacher Education. Candidates must meet set standards for admission to this program, which must be verified by the Transfer Officer in the Office of the Dean, School of Education and Allied Professions. For further information, consult the Department of English chairperson.

The English department awards a writing certificate to students who achieve a 3.0 grade-point average in eighteen semester hours of approved writing and writing-related courses, including at least twelve semester hours of upper-divisional (300-400) courses, and who pass a final examination including an impromptu writing task. The English department also offers a writing internship program. For details on these advanced writing opportunities, consult the department chairperson.

## Faculty

Sheila Hassell Hughes, Chairperson
R. Andrew Slade, Director of Graduate Studies

Ann Biswas, Director of Writing Programs
Professors Emeriti: August, Henninger, Labadie, L. Marre, H. Martin, Means, Murphy, Palumbo, Patrouch, Stockum, Youngkin
Professors: Farrelly, Hughes, Kimbrough, K. Marre, McCombe, Pici, Strain, Wilhoit

Associate Professors: Bardine, Boehnlein, Carrillo, Krummel, Morgan, Potter, Slade, Trollinger, Vorachek
Assistant Professors: Friedlander, Haan, Li, Szeghi, Thomas
Lecturers: Adams, Biswas, Burnside, DeAloia, Doench, Getrost, Keane-
Sexton, MacKay, MacLeod, E. Martin, Stephens, Taaffe

## Bachelor of Arts with a major in English (eng) Minimum 124 Hours

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |
| HST 103 The West \& the World |  |
| REL 103 Introduction to Religioius \& Theological Studies |  |
| PHL 103 Introduction to Philosophy |  |
| ENG 100 Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable credit |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable
Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice

Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts) 3
L2 Proficiency (Proficiency in a language other than English) 0-11

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements ${ }^{1,2,3}$

| ENG 100 | Writing Seminar I |
| :--- | :--- |
| (p. 158) | and Writing Seminar II |

\& ENG 200
(p. 158)
or ENG 200H Writing Seminar II
(p. 158)

| or ASI 120 | Dev West Global Ctxt |
| :--- | :--- |
| (p. 158) |  |
| ENG 300 <br> (p. 158) | Lit AnI\&Rsrch-Poetry |
| ENG 301 | Survey-Early Eng Lit |
| (p. 158) |  |
| ENG 302 | Survey-Later Eng Lit |
| (p. 158) |  |
| ENG 305 | Survey-American Lit |
| (p. 158) |  |
| ENG 362 | Shakespeare |
| (p. 158) |  |
| ENG 476 | Composition Theory ${ }^{4}$ |
| (p. 158) |  |
| or ENG 488 | Literary Theory |
| (p. 158) |  |
| or ENG 489 | Rhetorical Criticism |
| (p. 158) |  |
| ENG 490 | Seminar (Satisfies CAP Major Capstone) |
| (p. 158) |  |


| Select one writing course $(300 / 400$ level $)$ | 3 |
| :--- | :---: |
| ENG electives | $6-12$ |

## Breadth

| ASI 150 | Intr to the Univ Exp | 1 |
| :--- | ---: | ---: |
| (p. 158) |  | 124 |

1 Satisfies CAP First and Second-Year Writing Seminar.
2 May include CAP Arts.
3 ENG 100A and 100B together will satisfy the requirement of 3 semester hours of ENG 100. ASI 120 satisfies the requirement of 3 semester hours of ENG 200H. Students exempt from ENG 200H due to ACT/SAT scores still need to complete 36 semester hours for the major.
4 ENG 476 is recommended for students who plan to teach English and writing; ENG 488 is recommended for students who plan to pursue graduate studies in literature; ENG 489 is appropriate as a primary theory course for students who do not plan to teach and/ or those who may pursue law or graduate study in rhetoric-related fields.

## Minor in English (eng)

## English

| Select four ENG courses (300/400 level) $^{1}$ | 12 |
| :--- | :--- |
| Total Hours | 12 |

1 In addition to the composition requirement.

## Courses

ENG 100. Writing Seminar I. 3 Hours
Introductory composition course focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose.

ENG 100A. Writing Seminar 1A. 2 Hours
First half of two-semester introductory composition course sequence focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose. Prerequisite(s): Placement as determined by the Office of the Dean.

## ENG 100B. Writing Seminar 1B. 2 Hours

Second half of year-long introductory composition course focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose. Prerequisite(s): ENG 100A.

## ENG 101. College Composition I. 3 Hours

Analysis of the processes of reading and writing aimed at the development and refinement of critical thinking skills, critical reading skills, and critical writing skills. Students must pass course with a grade of C- or higher to satisfy the University requirement in general reading and writing competencies.

## ENG 102. College Composition II. 3 Hours

Study of appropriate rhetorical structures and styles for analytic, synthetic, and argumentative essays. Practice in developing critical reading and writing skills with an emphasis on writing from sources. Students must pass the course with a grade of C- or higher to satisfy the University requirement in general reading and writing competencies. Prerequisite(s): ENG 101.

## ENG 151. Introduction to Literature. 3 Hours

Critical study of literary forms - fiction, drama, and poetry - representative of various eras and cultures. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 101) or ASI 110) or equivalent. ENG 100 or ENG 100B may be taken as a corequisite.

## ENG 198. English Scholars' Seminar. 3 Hours

Study and seminar discussion of selected literary masterworks and appropriate criticism thereof, with equal emphasis on composition. Open by permission only to first-year students in the Berry Scholars Program. Students must pass the course with a grade of C - or higher to satisfy the University requirement in general reading and writing competencies.

## ENG 200. Writing Seminar II. 3 Hours

Variable theme composition course focused on academic discourse, research, and argumentation. Instruction and practice in developing reading, writing, and research skills introduced in ENG 100 and employed across the curriculum. Emphasis is on rhetorical analysis and a process approach to writing effective academic arguments. Prerequisite(s): ENG 100 or (ENG 100A, ENG 100B); sophomore standing or placement as determined by the Office of the Dean.

## ENG 200H. Writing Seminar II. 3 Hours

Variable theme composition course focused on academic discourse, research, and argumentation. Instruction and practice in developing reading, writing, and research skills introduced in ENG 100 and employed across the curriculum. Emphasis is on rhetorical analysis and a process approach to writing effective academic arguments. Prerequisite(s): Placement as determined by the Office of the Dean.

## ENG 203. Major British Writers. 3 Hours

Study of four or five writers representative of the principal periods in English literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.

## ENG 204. Major American Writers. 3 Hours

Study of four or five writers representative of the principal periods in American literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 205. Major World Writers. 3 Hours
Study (in translation) of four or five writers representative of the principal periods in (chiefly Western world) literature, exclusive of English and American literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

ENG 210. Poetry. 3 Hours
Study of representative examples of a major literary genre.
Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 230. Topics in Literature. 1-6 Hours

Exploration of varying approaches to the study of literature. Can be repeated under special circumstances. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 242. Sophomore Honors. 3 Hours

Seminar in which selected works from the literature of Western civilization are studied. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 270. Reading \& Writing in the American University. 4 Hours Provides students who are English language learners with an understanding of rhetorical principles and the conventions of Western academic literacy as well as competence in applying those principles and conventions for success as writers in an American university. Prerequisite(s): Permission of department chairperson.

ENG 271. Technical Writing Laboratory. 2 Hours
Designed to complement Engineering Technology courses by analyzing representative technical reports and documents and by providing guidance in planning, drafting, and revising writing assignments. Its focus is on the discipline-specific types of writing in the professional technical/ engineering fields including laboratory reports, correspondence, technical descriptions, specifications, and proposals. Prerequisite(s): ENG 270.

ENG 271L. Technical Writing Laboratory. 2 Hours
Designed to complement Engineering Technology courses by analyzing representative technical reports and documents and by providing guidance in planning, drafting, and revising writing assignments. Its focus is on the discipline-specific types of writing in the professional technical/ engineering fields including laboratory reports, correspondence, technical descriptions, specifications, and proposals. Prerequisite(s): ENG 270.

## ENG 272. Writing \& Research. 3 Hours

Study and practice of research methods commonly required to complete writing assignments across the curriculum. Formulation of research questions, use of appropriate methods to gather data, analysis of information, and creation of effective written documents. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.
ENG 282. Introduction to Writing Poetry. 3 Hours
Beginning course in analyzing and writing poetry. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 284. Introduction to Writing Fiction. 3 Hours

Beginning course in analyzing and writing short fiction. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

ENG 286. Introduction to Writing Drama. 3 Hours
Beginning course in analyzing and writing short plays. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or EBG 200H) or ASI 110) or equivalent.

## ENG 300. Literary Analysis \& Research - Poetry. 3 Hours

Detailed analysis of selected poems, with attention to their use of traditional forms and conventions, combined with training in standard methods of interpretation and research. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 301. Survey of Early English Literature. 3 Hours
Survey of English literature from the Medieval period to the end of the eighteenth century. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 302. Survey of Later English. 3 Hours

Survey of English literature from the beginning of the Romantic period to the present. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 305. Survey of American Literature. 3 Hours

Survey of American literature from the Colonial period to the present. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 306. Survey of Continental Literature. 3 Hours

Survey of continental European literature from Homer to the present. Prerequisite(s): ((ENG 100 or ENG 100 B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 308. Intermediate Poetry Workshop. 3 Hours
Intensive practice in the writing of poems. Prerequisite(s): ENG 282 or permission of department chairperson.

## ENG 310. Intermediate Fiction Workshop. 3 Hours

Intensive practice in the writing of fiction. Prerequisite(s): ENG 284 or permission of department chairperson.

## ENG 312. Advanced Writing of Drama. 3 Hours

Intensive practice in the writing of plays. Prerequisite(s): ENG 286 or permission of department chairperson.

## ENG 315. Creative Nonfiction. 3 Hours

Study, analysis, and writing of a number of creative nonfiction forms, including memoir, personal essay, biography, opinion essay, and weblogs. Focus on writing process, rhetorical awareness, style, and voice in expressive writing. Prerequisite(s): ((ENG 100 or ENG 100 B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.

## ENG 316. Elements of Style. 3 Hours

Study of stylistic options available to all writers. Examination of and practice in adapting writing style for various audiences and purposes, altering style to achieve desired effects, and developing a distinctive written voice. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

## ENG 317. Contemporary Poetry. 3 Hours

Study of selected poems by recent writers. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 319. Contemporary Fiction. 3 Hours
Study of selected novels and short fiction by recent writers.
Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 320. Contemporary Drama. 3 Hours

Study of selected plays to illustrate major tendencies of modern drama. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 321. Reading Popular Music. 3 Hours

A focus on popular music texts and scholarly approaches to these texts drawn from a wide range of academic disciplines. Assignments and inclass activities will emphasize critical reading and writing skills as applied to both the popular music texts and the secondary sources which analyze them. Course may be repeated as topics change. Prerequisite(s): ENG 200 or ENG 200H or ASI120.
ENG 322. Masterpieces of World Literature. 3 Hours
Intensive study of major literary works representative of various cultures. Works are studied in translation, although an English language work or two may be included for appropriate comparison. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 323. Literature of the Christian Tradition. 3 Hours

Study of literary works that form part of the Christian religious tradition. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 324. The Novel. 3 Hours

Consideration of selected novels to illustrate various fictional modes.
Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 325. Science Fiction. 3 Hours

Survey of science fiction with detailed analysis of selected novels and short fiction. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.

## ENG 326. Sport \& Literature. 3 Hours

An historical approach to analyzing the function of sport in society and literature, from Greek times to contemporary times. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 327. Studies in Popular Fiction. 3 Hours

Analysis of selected artifacts of popular culture with reference to serious literature. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 328. American Nobel Authors. 3 Hours

Analysis and discussion of the works of several American Nobel Prize winners in the field of literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 329. Short Story. 3 Hours

Study of the techniques employed in the writing of the short story. Analysis of various models of the short story. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.
ENG 330. Development of Drama. 3 Hours
Study of the historical development of the drama from its beginnings to the nineteenth century. Analysis of plays from each significant period.
Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 331. Studies in Film. 3 Hours

Analysis of selected films to show developments in film technique or criticism. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.

## ENG 332. Studies in Literature \& Film. 3 Hours

Studies in literary texts and the film treatments of those texts. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

ENG 333. Images of Women in Literature. 3 Hours
Examination of significant literary works that present and respond to images of women, with critical attention to social and historical context, including application of feminist critical approaches. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 334. Modern Men -- Images. 3 Hours

Critical examination of significant literary works that portray males in traditional and non-traditional roles. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 335. African American Literature. 3 Hours

Study of African American writers and their oral and literary traditions. Emphasis on issues such as race, gender, and religion. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 336. Gender in Fiction. 3 Hours

Study of major works of American and British male and female authors from different periods, analyzing the authors, their principal characters, themes, and narrative technique as they reflect different aspects of the issue of gender in literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

ENG 337. Studies in Folklore. 3 Hours
Selected studies in American and/or world folklore. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.

ENG 338. Images of Business. 3 Hours
Examination of the modern world of work, the image of the business 'professional', and the influence of organization on global society and values as these themes are revealed primarily in modern literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 339. American Indian Literature. 3 Hours

Study of American Indian writers and their oral and literary traditions. Emphasis on such issues as race, gender, and religion. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 340. The Prison in Literature. 3 Hours

Survey of prison literature from the rise of the modern prison in the late eighteenth century through the contemporary period. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 341. Asian-American Literature. 3 Hours

Study of Asian American writers and their literary traditions. Emphasis on issues of race, gender, and class. Prerequisite(s): ((ENG 100 or ENG 100 B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 342. Literature \& Environment. 3 Hours
Examination of nature and environment in literature, focusing on literary representations of nature; nature writing; fiction and ecocritcism; the environment and the literary imagination. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 343. Literature of the Fifties. 3 Hours

Study of three identifiable cultures of the 1950s in America that were concerned with dillusionment, conformity, alienation, and artistic standards in literature: African-American, Beat, and Jewish writers. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 344. Literature of the Sixties. 3 Hours

Examination of the Sixties from the perspectives of cultural and literary studies. To this end, it focuses on major works of fiction, essays, New Journalism, and film. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 345. Colonial \& Postcolonial Literature. 3 Hours

Examination of significant literary works that reveal the diversity of human cultures shaped by colonial and postcolonial contexts. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 346. Literature \& Human Rights. 3 Hours

Study of works of literature that address human rights concerns, supplemented with study of foundational philosophical, theological, and political texts that address the meaning and origin of human rights. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 347. Young Adult Literature. 3 Hours

Critical study of literature written for young adults, including an analysis of the historical trends, debates, and issues in the field. Prerequisite(s): ENG 100 or 100 B or 200 H or ASI 110.

## ENG 348. Modern Irish Literature. 3 Hours

Consideration principally of the Irish literary revival of the late nineteenth and early twentieth centuries with appropriate background material. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 350. European Literature of Antiquity. 3 Hours

Study of significant works from the Old Testament and Greek, Roman, English, Irish, and/or Scandinavian writers. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 351. European Literature of Middle Ages. 3 Hours

Study of selected literary masterpieces of western civilization in the Middle Ages. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

ENG 353. Literature of the Renaissance. 3 Hours
Study of selected literary masterpieces from England and the Continent that illustrate the culture and ideas of the Renaissance. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent

ENG 354. Literature of the Enlightenment. 3 Hours
Study of selected English and European literature from the Age of Reason. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.

## ENG 355. Literature of the Romantic Age. 3 Hours

Study of the Romantic Revolution as illustrated in representative writings of English and European authors. Prerequisite(s): ((ENG 100 or ENG 100 B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 356. European Literature of the 19th Century. 3 Hours

Study of representative masterpieces from the literature of England and the Continent during the nineteenth century. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

ENG 357. European Literature of the Early 20th Century. 3 Hours
Study of significant English and European literature that illustrates the ideas and culture of the early modern period. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

ENG 358. Contemporary Literature of Europe. 3 Hours
Study of selected western European literature that illustrates the ideas and culture of the present age. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

ENG 360. US Latina/Latino Literature. 3 Hours
Study of U.S. Latina/o authors writing in English and their literary traditions. Emphasis on issues of race, gender, and class. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 362. Shakespeare. 3 Hours

Study of selected plays and poems of Shakespeare. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 362L. Shakespeare Performance Laboratory. 1 Hour

Study of Shakespearean performances through films, video tapes, and recordings. Three hours a week. Students in 362L must have already taken or be registered for ENG 362 or an equivalent Shakespeare course. Corequisite(s): ENG 362 or equivalent Shakespeare course.

## ENG 363. Shakespeare's Worlds. 3 Hours

Concentrated analysis of the various worlds created in Shakespeare's plays and their interconnection with and depiction of the major elements of the historical world of early modern England. In the process of this integrated analysis, the Historical Study and Arts Study domains will be respected and taught as separate disciplines. This course is cross-listed with HST 308.

## ENG 370. Report \& Proposal Writing. 3 Hours

Analysis and practice in effective report and proposal writing. Emphasis on employing appropriate rhetorical and technological tools to analyze, produce, and edit proposals and reports for both business and non-profit audiences. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

## ENG 371. Technical Communication. 3 Hours

Study and practice of effective written communication in technical professions. Emphasis on rhetorical and technological tools and editing skills needed to analyze and create technical documents with written and visual elements. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

## ENG 372. Business Communication. 3 Hours

Study and practice in the principles and processes of effective written communication typically encountered in business and other professions. Focus on use of appropriate rhetorical and technological tools to analyze, write, and edit a range of texts including letters, memos, policies, procedures, job descriptions, resumes, performance reviews, reports, and proposals. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

## ENG 373. Medical Writing. 3 Hours

Intensive practice in reading and writing for the healthcare professions. Designed for pre-medicine, pre-dentistry, pre-veterinary, and prephysical therapy students. Practice in research and workplace writing, uses of narrative in medicine, the personal essay, and MCAT essay. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

## ENG 375. Rhetoric of the World Wide Web. 3 Hours

Analysis and production of textual and visual elements common to the World Wide Web. Emphasis on rhetoric of electronic communication, usability, audience analysis, and integrating text and graphics. Basic web development techniques will be covered, but previous experience is helpful. Knowledge of HTML, XML, and style sheets is helpful but not required. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

## ENG 376. Topics in Writing. 1-6 Hours

Analysis of and practice in specific forms of writing. May be repeated as forms change. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

ENG 378. Professional \& Technical Writing. 3 Hours
Professional and Technical Writing.
ENG 379. Rhetoric of Science. 3 Hours
Introduction to the role rhetoric and language play in science writing. Focus on the rhetorical analysis of public policy controversies involving science and technology and the role rhetoric plays in the public's understanding of these issues. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

## ENG 380. Studies in Literature. 1-6 Hours

Study of special topics or themes in literature. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200 H ) or ASI 110) or equivalent.

## ENG 382. Mozart's Operas. 3 Hours

An interdisciplinary survey of Mozart's operas - German and Italian, serious and comic. Class discussions will be supplemented by extensive listening and/or viewing of recorded performances and, when possible, attendance at live performances. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 383. Tragic Dilemma. 3 Hours
Examination of tragedy from ancient times to modern times, with emphasis on both the form(s) of tragedy and the tragic vision of life. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

## ENG 384. Christianity \& Modern Poetry. 3 Hours

Study of selected poets from the modern period whose work draws from the major literary, intellectual, cultural, and theological traditions of Christianity. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 385. Religion \& Literature. 3 Hours
Interdisciplinary study of literature and religion, seeking the sacred in the secular, discussing the doctrines of humans and of God in major writings, especially those of current collegiate interest. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.
ENG 387. Literature \& Ethics. 3 Hours
No description available.

## ENG 395. Junior Honors Tutorial. 3 Hours

Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Prerequisite(s): ((ENG 200 or ENG 200 H ) or ASI 120) or equivalent; junior standing; permission of instructor.

## ENG 405. Chaucer. 3 Hours

Study of Chaucer's life, world, language, and literary achievement, concentrating on The Canterbury Tales (in Middle English).
Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200 H .

ENG 407. Medieval English Literature. 3 Hours
Study of the dominant types in the literature of England from the beginning to 1500. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

## ENG 410. Early Renaissance Literature. 3 Hours

Survey of the literature of the sixteenth century from Thomas More to Sidney and Spenser. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.
ENG 414. Later Renaissance Literature. 3 Hours
Survey of the literature of the early seventeenth century from Bacon, Jonson, and Donne to Marvell, exclusive of Milton. Prerequisite(s): 200or 300-level English course excluding ENG 200, ENG 200H.
ENG 431. Milton. 3 Hours
Study of the major and minor poems and selected prose of Milton.
Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200 H .

ENG 433. Studies in Neo-Classical Literature. 3 Hours
Study of English literature from Dryden to Johnson. May be repeated as topics change. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

## ENG 438. English Romanticism. 3 Hours

Study of the major poets and critics of the Romantic Age. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

ENG 444. Studies in 19th Century English Literature. 3 Hours
Study of English literature in the nineteenth century. May be repeated as topics change. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.
ENG 448. 20th Century British Literature. 3 Hours
Study of significant developments in modern British literature.
Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

ENG 451. American Romanticism. 3 Hours
Study of significant developments in American literature of the mid-19th century. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.
ENG 453. American Realism \& Naturalism. 3 Hours
Study of representative writers from the post-Civil War period in American literature. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.
ENG 455. 20th Century American Literature. 3 Hours
Study of significant developments in American literature of the twentieth century. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

## ENG 460. Advanced Poetry Workshop. 3 Hours

Intensive practice in writing of poetry and production of a chapbook. Prerequisite(s): ENG 308.

## ENG 462. Advanced Fiction Workshop. 3 Hours

Intensive practice in writing of fiction and production of a novella or short story cycle. Prerequisite(s): ENG 310.

## ENG 468. Introduction to Linguistics. 3 Hours

Introduction to the basic concepts and procedures of general linguistics, including language description, history, variation, theory, and acquisition. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

## ENG 470. History of English. 3 Hours

Study of stages in the development of the English language and of influences shaping its development from the beginning to the present. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

## ENG 472. The Structure of English. 3 Hours

Study of the grammatical structure of modern English from traditional and modern linguistic points of view. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

## ENG 474. Argumentation. 3 Hours

Intensive study of argumentative writing. Theories and principles of argument and persuasion. Emphasis on formal arguments. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

## ENG 476. Composition Theory. 3 Hours

Study of the principal current theories of composition, with application to the teaching and evaluating of writing. Prerequisite(s): ENG 316 or permission of instructor.

## ENG 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## ENG 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved ENG 477; approval of University Honors Program.

ENG 480. Independent Study. 1-6 Hours
Individual investigations of special topics under faculty direction. May be repeated under special circumstances. Prerequisite(s): At least fifteen semester hours of English; permission of department chairperson.
ENG 481. Topics in English Studies. 1-6 Hours
Systematic study of a specialized topic in English Studies.
Prerequisite(s): 200- or 300-level English course excluding ENG 200,
ENG 200 H .
ENG 482. Modern Poetry. 3 Hours
Concentrated, advanced study in the development of modern poetry, both English and American. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

## ENG 485. Internshp in Writing. 1-6 Hours

Application of writing skills to specific projects of an approved organization. Practical and professional experience offered to juniors and seniors (particularly English majors and minors) as a supplement to the writing curriculum. Option 2 grading only. Prerequisite(s): ENG 370, ENG 371, ENG 372; junior or senior standing; 2.5 cumulative GPA and at least 3.0 GPA in English courses; permission of Internship Coordinator.

## ENG 488. Literary Theory. 3 Hours

Comparative critical reading of classical and modern theoretical texts and analysis of critical methodology. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

## ENG 489. Rhetorical Criticism. 3 Hours

Study and practice of classical and contemporary rhetorical theories and techniques. Focus on writing rhetorical analyses of non-literary texts, including political discourse, advertising, scholarly essays, and visual images. Prerequisite(s): (ENG 272 or ENG 316) or permission of instructor; junior or senior standing.

## ENG 490. Seminar. 3 Hours

Concentrated study of a topic designed to integrate selected aspects of literary history, critical approaches, and research skills developed by English majors in previous required courses. May be repeated as topics change. Prerequisite(s): ENG 300, ENG 301, ENG 302, ENG 305, (ENG 476 or ENG 488 or ENG 489).

## ENG 495. Senior Honors Tutorial. 3 Hours

Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Prerequisite(s): Permission of department chairperson.

## Family Development

The interdisciplinary minor in family development increases understanding of the meaning and dynamics of marriage and parenthood in contemporary society. It examines the family as a major institution affecting society and surveys the individual, social, and economic problems found within families. This background contributes to preparation for careers in areas such as social work, psychology, education, communication, human ecology, and religious work.

Students minoring in family development must complete sixteen semester hours, including ASI 448, SOC 331 and twelve semester hours from approved courses. The total semester hours for the minor must come from three different academic disciplines and may double count to majors and other minors.

Students desiring to minor in family development should notify their advisors, their deans, and the coordinator of family development.

## Family Development Coordinator

Brenda Donnelly (Fitz Center for Leadership in Community)

## Minor in Family Development (FDV)

## Family Development

| ASI 448 | Sem-Family Development | 1 |
| :--- | :--- | ---: |
| (p. 164) | Marriage \& Family | 3 |
| SOC 331 <br> (p. 164) |  | 12 |
| Select four courses from three different disciplines: |  |  |

ANT 320 Anthro of Childhoods
(p. 164)

| CMM 410 <br> (p. 164) | Family Communication |  |
| :---: | :---: | :---: |
| CMM 499 <br> (p. 164) | Sp Top-Communication |  |
| CMS 415 <br> (p. 164) | Women \& Communication |  |
| $\begin{aligned} & \text { HST } 351 \\ & (\mathrm{p} .164) \end{aligned}$ | Women Gender Am |  |
| HST 352 <br> (p. 164) | Hst of Amer Family |  |
| $\begin{aligned} & \text { HST } 353 \\ & \text { (p. 164) } \end{aligned}$ | Hst-Wom in Eurp Soc |  |
| HST 354 <br> (p. 164) | Hst-Women Mid East |  |
| $\begin{aligned} & \text { PHL } 318 \\ & \text { (p. 164) } \end{aligned}$ | Family Ethics |  |
| $\begin{aligned} & \text { PSY } 251 \\ & \text { (p. 164) } \end{aligned}$ | Hum Growth \& Develop |  |
| $\begin{aligned} & \text { PSY } 351 \\ & \text { (p. 164) } \end{aligned}$ | Child Psychology |  |
| $\begin{aligned} & \text { PSY } 353 \\ & \text { (p. 164) } \end{aligned}$ | PSY Adult Dev/Aging |  |
| $\begin{aligned} & \text { PSY } 355 \\ & \text { (p. 164) } \end{aligned}$ | Devip Psychpath |  |
| $\begin{aligned} & \text { PSY } 443 \\ & \text { (p. 164) } \end{aligned}$ | Psychology of Women |  |
| $\begin{aligned} & \text { PSY } 457 \\ & \text { (p. 164) } \end{aligned}$ | Tv/Effects on Chldrn |  |
| $\begin{aligned} & \text { PSY } 462 \\ & \text { (p. 164) } \end{aligned}$ | Human Sexuality |  |
| $\begin{aligned} & \text { REL } 344 \\ & \text { (p. 164) } \end{aligned}$ | Christian Marriage |  |
| $\begin{aligned} & \text { REL } 362 \\ & \text { (p. 164) } \end{aligned}$ | Chr Famly Values\&TV |  |
| $\begin{aligned} & \text { SOC } 322 \\ & \text { (p. 164) } \end{aligned}$ | Sex Roles \& Society |  |
| $\begin{aligned} & \text { SOC } 323 \\ & (p .164) \end{aligned}$ | Juvenile Justice |  |
| $\begin{aligned} & \text { SOC } 330 \\ & \text { (p. 164) } \end{aligned}$ | Perspctves-Agng |  |
| $\begin{aligned} & \text { SOC } 333 \\ & (p .164) \end{aligned}$ | Soc of Sexualities |  |
| $\begin{aligned} & \text { SOC } 355 \\ & \text { (p. 164) } \end{aligned}$ | Famlies\&The Economy |  |
| SWK 325 <br> (p. 164) | Child Abuse |  |
| SWK 327 <br> (p. 164) | Parentng:Soc Welfare |  |
| SWK 330 <br> (p. 164) | Perspectives on Aging |  |
| SWK 331 <br> (p. 164) | Death, Dying and Suicide |  |
| tal Hours |  | 16 |

## Film Studies

The interdisciplinary minor in film studies (FLM) provides students an opportunity to explore one of the most popular and influential media of the twentieth century. Students study the history, theory, and aesthetics of film and consider film from literary, philosophic, religious, economic, and creative perspectives. The minor complements many of the existing majors in the arts and sciences and enhances the academic preparation of students who are considering graduate school and/or careers in film criticism, screenwriting, or film production.

Students minoring in film studies must complete thirteen semester hours, including ASI 350 and twelve semester hours from approved courses. The total semester hours for the minor must come from at least three different academic disciplines.

Students desiring to minor in film studies should notify their respective deans and the coordinator of film studies.

## Film Studies Committee

James Farrelly (English), Coordinator
Fouke (Philosophy), Kimbrough (English), McCombe (English), Zukowski (Religious Studies)

## Minor in Film Studies (FLM)

## Film Studies

| ASI 350 | Interdisp Film Study ${ }^{1}$ | 1 |
| :--- | :--- | :--- |

Select four courses from: ${ }^{2} 12$

| CMM 345 | Class Amer Film |
| :--- | :--- |
| (p. 165) |  |
| ENG 331 | Studies in Film |
| (p. 165) |  |
| ENG 332 <br> (p. 165) | Studies-Lit \& Film |
| MUS 327 | Music in Film |
| (p. 165) |  |
| PHL 324 <br> (p. 165) | Philosophy \& Film |
| REL 372 | Religion \& Film |
| (p. 165) |  |
| Total Hours |  |

1 Capstone course taken after all elective courses have been completed.
2 Or other courses with permission of the committee.

## General Studies

- Bachelor of General Studies (p. 166)

The Bachelor of General Studies program is designed for those students who desire to pursue a non-traditional degree program at the University outside of any departmental major. This degree program permits great latitude in utilizing the academic resources of the University for planning and acquiring an education to meet individual needs. Students may plan their programs to the best advantage of their particular educational objectives. Students build their programs on the foundation of University's Common Academic Program requirements.

## Bachelor of General Studies (GEN) Minimum 120 Hours

Admission requirements for the Bachelor of General Studies are the same as those for any other degree offered in the College of Arts and Sciences.

Candidacy for the Bachelor of General Studies may be declared in the first year but not later than the commencement of a student's last thirty semester hours of study. An application for acceptance into the degree program must be completed and approved by an Assistant Dean in the College of Arts and Sciences. Any students in good academic standing may request transfer into this program.

The General Studies student is required to plan an academic program to satisfy the requirements for graduation in consultation with an Assistant Dean. The General Studies student must complete a minimum of the last thirty semester hours of study under the supervision of an Assistant Dean who will serve as the student's advisor. The usual policy of prerequisites remains in effect in this program.

1. College of Arts and Sciences' Competencies and the University's Common Academic Program requirements,
2. Three semester hours of mathematics selected from courses offered by the Mathematics department (excluding MTH 205),
3. Study of the natural sciences by completing seven semester hours in approved natural science courses (biology, chemistry, geology, physics), including one course with accompanying laboratory,
4. A minimum of fifty-four semester hours of courses at the 300-400 level with a grade point average of 2.0 or better,
5. Not more than thirty semester hours of work from any one academic discipline.
6. Credits earned in completion of the Bachelor of General Studies may not be applied at a later time to the credits for a second degree from the College of Arts and Sciences.
7. Successful completion of GNS 480, Senior Capstone course.

A Bachelor of General Studies requires at least 120 semester hours of credit.

## Geology

Majors:

- Bachelor of Science, Environmental Geology (p. 166)
- Bachelor of Science, Geology (p. 168)

Minor:

- Geology (p. 169)

Geology is the study of the Earth, past and present. It incorporates many aspects of our complex planet including its composition, structure, environment, dynamic and hazardous processes, and the development of life, continents and oceans through time. Geology plays a critical role in interpreting the Earth's long history of physical and biological changes, finding and managing natural resources, and understanding future environmental change.

The geology department offers two programs leading to Bachelor of Science degrees in geology and environmental geology. The geology (GEO) major provides basic courses in the geological sciences as well as a range of advanced level classes that allow students to develop courses
of study that complement particular interests within the field such as energy and mineral resources, plate tectonics, or paleontology.

The environmental geology (EVG) program is broad in scope, providing a broad foundation in the fundamentals of earth and environmental science as well as an interdisciplinary curriculum that includes geology, biology, chemistry, and other allied science courses. The EVG curriculum stresses the interdisciplinary nature of modern environmental issues such as climate change and the development of alternative energy resources.

The geology department also offers a Geographic Information Systems (GIS) Certificate Program. GIS is used in a wide range of disciplines, and the certificate program is a great option for professionals, graduate students, and undergraduate students who are interested in becoming proficient at managing, analyzing and displaying all forms of geographically referenced information.

The geology department aims to prepare students for both careers in the geological sciences, and for further academic studies. Hence, graduates of the department are also highly competitive for entry to graduate programs. Geology department majors pursue careers in a wide range of settings including:

- State and Federal Geological Agencies
- Geological Consulting Companies
- Natural Resource Exploration, Development and Management
- Museums
- Research Laboratories
- Education

Environmental geologists address critical needs of our society including global climate change, groundwater protection, energy resources, and the identification and assessment of natural hazards.

A minor in geology consists of twelve semester hours.

## Faculty

Daniel Goldman, Chairperson
Professor Emeritus: Ritter
Professors: Pair, Sandy
Associate Professors: Goldman, Koziol, A. McGrew, Wu
Assistant Professor: Haritashya
Lecturer: Bedaso
Lab Coordinator: Schoenenberger

## Bachelor of Science with a major in Environmental Geology (EVG) Minimum 120 Hours

The following program, leading to the Bachelor of Science with a major in environmental geology, is designed to present students with the basic courses in the geological sciences as well as provide specific environmental geology courses. The program also requires additional related science courses.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |



| $\begin{aligned} & \text { GEO } 450 \\ & (\text { p. 166) } \end{aligned}$ | Applied GIS |  |
| :---: | :---: | :---: |
| Select six scie | electives from: | 17 |
| BIO 310 <br> (p. 166) <br> \& 310L <br> (p. 166) | Ecology and Ecology Lab |  |
| $\begin{aligned} & \text { BIO } 350 \\ & \text { (p. 166) } \\ & \& 350 \mathrm{~L} \\ & (\text { p. 166) } \end{aligned}$ | Applied Microbiology and Applied Microbio Lab |  |
| BIO 452 <br> (p. 166) <br> \& 452L <br> (p. 166) | Bio Rivers \& Lakes and Bio River\&Lake Lab |  |
| BIO 459 <br> (p. 166) <br> \& 459L <br> (p. 166) | Envirnmntl Ecology and Envirnmtl Eco Lab |  |
| CEE 312 <br> (p. 166) <br> \& 312L <br> (p. 166) | Geotechnical Engr and Geotechncl Engr Lab |  |
| CEE 390 <br> (p. 166) | Envr Pollutn Cntrl |  |
| CEE 434 <br> (p. 166) <br> \& 434L <br> (p. 166) | Water \& Waste Engr and Watr\&Waste Engr Lab |  |
| CHM 201 <br> (p. 166) <br> \& 201L <br> (p. 166) | Quantitative Anal and Quant Analysis Lab |  |
| CHM 302 <br> (p. 166) | Physical Chemistry |  |
| CHM 313 <br> (p. 166) <br> \& 313L <br> (p. 166) | Organic Chemistry and Organic Chemistry Lab |  |
| CHM 341 <br> (p. 166) <br> \& 341L <br> (p. 166) | Environmental Chem and Environmntl Chm Lab |  |
| $\begin{aligned} & \text { CPS } 132 \\ & \text { (p. 166) } \end{aligned}$ | Progrmmng-Engr \& Sci |  |
| CPS 144 <br> (p. 166) | Intro-Computr Progrm |  |
| MTH 218 <br> (p. 166) | Anly Geom \& Calc III |  |
| MTH 219 <br> (p. 166) | Appl Diff Equations |  |
| MTH 367 <br> (p. 166) | Statistical Meth I |  |
| MTH 368 <br> (p. 166) | Statistical Meth II |  |

Breadth
ASI $150 \quad$ Intr to the Univ Exp
(p. 166)
Social and Behavioral Sciences (Includes CAP Social Science)
Total Hours to total at least
1 May substitute MTH 148 (p. 166)-MTH 149 (p. 166) with
permission of department chairperson.

$2 \quad$| May substitute PHY 201 (p. 166)-PHY 202 (p. 166) with |
| :--- |
| permission of department chairperson. |
| Bachelor of Science with a major in |
| Geology (GEO) Minimum $\mathbf{1 2 0}$ HOURs |

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3

CMM $100 \quad$ Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |


| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variable |
| Advanced Study | credit |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## Science Breadth Requirements

| (Satisfies CAP Mathematics and CAP Natural Sciences) |  |  |
| :--- | :--- | :--- |
| CHM 123 | General Chemistry | 4 |
| (p. 166) | and Gen Chemistry Lab |  |
| $\& 123 L(p .166)$ |  | 4 |
| CHM 124 | General Chemistry |  |
| (p. 166) | and Gen Chemistry Lab |  |
| $\& 124 L(p .166)$ |  |  |


| MTH 168 <br> (p. 166) | Anly Geom \& Calc ${ }^{1}$ | 4 |
| :---: | :---: | :---: |
| MTH 169 <br> (p. 166) | Anly Geom \& Calc II ${ }^{1}$ | 4 |
| PHY 206 (p. 166) | Gen Physics I Mech ${ }^{2}$ | 3 |
| PHY 207 <br> (p. 166) | Gen Phy II Ele \& Mag ${ }^{2}$ | 3 |
| Major Requirements |  | 54 |
| Year 1 |  |  |
| $\begin{aligned} & \text { GEO } 115 \\ & (\mathrm{p} .166) \\ & \text { \& 115L (p. 166) } \end{aligned}$ | Physical Geology and Physical Geology Lab | 4 |
| GEO 116 <br> (p. 166) <br> \& 116L (p. 166 | Geolgcl Hst-Earth and Geolgcl Hst-Earth Lb | 4 |
| Year 2 |  |  |
| $\begin{aligned} & \text { GEO } 201 \\ & \text { (p. 166) } \\ & \text { \& 201L (p. 166) } \end{aligned}$ | Mineralogy and Mineralogy Lab | 4 |
| Year 3 |  |  |
| $\begin{aligned} & \text { GEO } 301 \\ & (\text { p. 166) } \\ & \& 301 \mathrm{~L}(\mathrm{p} .166) \end{aligned}$ | Structural Geology and Structural Geo Lab | 4 |
| $\begin{aligned} & \text { GEO } 307 \\ & \text { (p. 166) } \\ & \text { \& 307L (p. 166) } \end{aligned}$ | Geomorphology and Geomorphology Lab | 4 |
| Year 4 |  |  |
| $\begin{aligned} & \text { GEO } 303 \\ & \text { (p. 166) } \end{aligned}$ | Field Geology | 6 |
| $\begin{aligned} & \text { GEO } 310 \\ & \text { (p. 166) } \\ & \& 310 \mathrm{~L}(\mathrm{p} .166) \end{aligned}$ | Stratigraphy and Stratigraphy Lab | 4 |
| GEO 401 <br> (p. 166) <br> \& 401L (p. 166) | Paleontology and Paleontology Lab | 4 |
| $\begin{aligned} & \text { GEO } 403 \\ & (\text { p. 166) } \\ & \& 403 L(p .166) \end{aligned}$ | Sedimentology and Sedimentology Lab | 4 |
| Select one from | (Satisfies CAP Major Capstone) | 2-6 |
| $\begin{aligned} & \text { GEO } 477 \\ & \text { (p. 166) } \\ & \& \text { GEO } 478 \\ & \text { (p. 166) } \end{aligned}$ | Honors Thesis and Honors Thesis |  |
| $\begin{aligned} & \text { GEO } 480 \\ & (\text { p. 166) } \end{aligned}$ | Senior Capstone |  |
| $\begin{aligned} & \text { GEO } 498 \\ & (\text { p. 166) } \end{aligned}$ | Research\&Thesis |  |
| Select GEO electives from: |  | 4 |
| GEO 302 <br> (p. 166) <br> \& 302L <br> (p. 166) | Glacial Geology and Glacial Geology Lab |  |


| GEO 308 | Probs-Envrmntl Geo |
| :--- | :--- |
| (p. 166) | and Probs in Env Geo Lab |
| \& 308L |  |
| (p. 166) |  |
| GEO 309 | Surf\&Groundwtr Hydr |
| (p. 166) | and Surf\&Groundwtr Hy Lb |
| \& 309L |  |
| (p. 166) |  |
| GEO 404 | Problems in Geology |
| (p. 166) |  |
| GEO 411 | Petrology |
| (p. 166) | and Petrology Lab |
| \& 411L |  |
| (p. 166) |  |
| GEO 412 | Intro Geochemistry |
| (p. 166) | and Intro Geochmstry Lab |
| \& 412L |  |
| (p. 166) |  |
| GEO 450 | Applied GIS |
| (p. 166) |  |
| GEO 477 | Honors Thesis |
| (p. 166) |  |

Science electives and laboratories where applicable from: ..... 8
BIO, CHM, CPS, GEO, MTH, PHY, Engineering ${ }^{3}$
Breadth

| ASI 150 Intr to the Univ Exp | 1 |  |
| :--- | :--- | ---: |
| (p. 166) |  |  |
| Social and Behavioral Sciences (Includes CAP Social Science) | 6 |  |
| Total Hours to total at least | 124 |  |
| 1 | May substitute MTH 148 (p. 166)-MTH 149 (p. 166) with |  |
|  | permission of department chairperson. |  |
| 2 | May substitute PHY 201 (p. 166)-PHY 202 (p. 166) with <br> permission of department chairperson. |  |
| 3 | With permission of department chairperson. |  |

## Minor in Geology (GEO)

| Geology | 12 |
| :--- | ---: |
| Select four GEO courses $(300 / 400 \text { level })^{1}$ | 12 |
| Total Hours |  |
| $1 \quad$ Appropriate prerequisites must be completed. |  |

## Courses

GEO 103. Principles of Physical Geography. 3 Hours
Analysis of the physical factors of the earth's environment: weather, climate, land forms, oceans.

## GEO 104. Biology-Geology Field Course. 3 Hours

Fundamental earth science topics with emphasis on direct field experience. One week on campus, three weeks in the Rocky Mountains near Denver, Colorado, and one week of travel. For all non-geology and non-biology majors. Corequisite(s): BIO 104; (BIO 104L or GEO 104L).
GEO 104L. Biology-Geology Field Laboratory. 1 Hour
Course to accompany GEO 104.

## GEO 109. General Geology. 3 Hours

Introduction to the earth as a planet, its composition, structure, and evolutionary development; a brief consideration of the life of the past. For the nonscience major. May be taken without laboratory.
GEO 109L. General Geology Laboratory. 1 Hour
Course to accompany GEO 109. Two hours each week.

## GEO 115. Physical Geology. 3 Hours

Introductory course in geologic principles; the composition and structure of the earth, its land forms, and the agencies active in their production. Laboratory optional for nonmajors.

GEO 115L. Physical Geology Laboratory. 1 Hour
Course to accompany GEO 115. Two hours each week. Prerequisite(s): (GEO 109 or GEO 115); permission of instructor.

GEO 116. Geological History of the Earth. 3 Hours
Comprehensive study of earth history from its origins to the present. Prerequisite(s): (GEO 109 or GEO 115); permission of instructor.

GEO 116L. Geological History of the Earth Laboratory. 1 Hour Course to accompany GEO 116. Two hours each week.

GEO 198. Geology, Landscape \& Environment of the Miami Valley. 3 Hours
Field-based course examining the geologic history of the Miami Valley and Dayton area; processes leading to the modern landscape; the impact of human activity will be assessed. Prerequisite(s): GEO 109 or GEO 115 or permission of instructor.

## GEO 201. Mineralogy. 3 Hours

Introduction to crystallography, crystal chemistry and crystal structure. Study of the major groups of rock-forming minerals, their association and occurrence with emphasis on identification by physical properties and optical techniques. Prerequisite(s): (GEO 109 or GEO 115) or permission of instructor.

## GEO 201L. Mineralogy Laboratory. 1 Hour

Course to accompany GEO 201. Three hours per week.
GEO 204. Geology for Teachers. 4 Hours
Introduction for preservice teachers to the Earth system and the processes that operate in the atmosphere, hydrosphere, biosphere, and solid Earth. Emphasis is on understanding how interactions among these fundamental Earth systems maintain our livable planet. Students will explore the Earth system through best practices in teaching and inquiry, and through field trips. For ECE, EMS, and EMM majors only. Students completing this course may not take SCI 210. Prerequisite(s): EDT 110; SCI 190.

## GEO 208. Environmental Geology. 3 Hours

Study of the relationship of geologic factors to the problems of water supply, pollution, erosion, land use, and earth resources. Laboratory optional. Prerequisite(s): (GEO 109 or GEO 115) or permission of instructor.

GEO 208L. Environmental Geology Laboratory. 1 Hour
Course to accompany GEO 208. Two hours each week.

## GEO 218. Engineering Geology. 3 Hours

Comprehensive study of geologic principles applicable to civil engineering practices.

## GEO 234. Energy Resources. 3 Hours

The chemical and geological aspects of formation, production, and benefits/costs (including environmental impacts) of energy derived from fossil fuels (coal and hydrocarbons), biofuels (e.g., ethanol production), radioactive materials (nuclear power), and renewable sources (e.g., geothermal, hydro, wind, and solar power). Prerequisite(s): CHM 123, CHM 124. Corequisite(s): GEO 208.

## GEO 301. Structural Geology. 3 Hours

The origin and development of structural features of the earth's crust; folding, faulting, volcanism, mountain building, and metamorphism. Prerequisite(s): GEO 115, GEO 116, GEO 201.
GEO 301L. Structural Geology Laboratory. 1 Hour
Course to accompany GEO 301. Two hours each week.
GEO 302. Glacial Geology. 3 Hours
The origin of mountain and continental glaciers; their depositional features and erosive activity; history of glaciation in geologic past with special emphasis on North American Quaternary ice advances. Prerequisite(s): GEO 115, GEO 116.

GEO 302L. Glacial Geology Laboratory. 1 Hour
Course to accompany GEO 302. Two hours each week.

## GEO 303. Field Geology. 6 Hours

Study of field relationships in an area containing abundant igneous, metamorphic, and sedimentary rocks. Prerequisite(s): GEO 115, GEO 116.

## GEO 307. Geomorphology. 3 Hours

Detailed study of landforms and the erosional processes that develop them. Prerequisite(s): GEO 115, GEO 116.
GEO 307L. Geomorphology Laboratory. 1 Hour Course to accompany GEO 307. Two hours each week.

GEO 308. Problems \& Decisions in Environmental Geology. 3 Hours An in-depth examination of selected environmental problems and the way in which scientific information guides practice and policy. Topics will range from investigations of natural hazards to considerations of land use and water resources. Prerequisite(s): (GEO 109 or GEO 115) or permission of instructor.

## GEO 308L. Problems \& Decisions in Environmental Geology

 Laboratory. 1 HourCourse to accompany GEO 308. Two hours each week and periodic field work.

## GEO 309. Surface \& Groundwater Hydrology. 3 Hours

This course is designed to provide a science or engineering student with the fundamental concepts and principles central to the study of water as a resource. This will include an examination of all components of the hydrologic cycle including surface-water hydrology and management, groundwater hydrogeology, and water resource management. Prerequisite(s): (GEO 109 or GEO 218) or permission of instructor.
GEO 309L. Surface and Groundwater Hydrology Laboratory. 1 Hour Laboratory exercises to accompany GEO 309. Three hours per week.

## GEO 310. Stratigraphy. 3 Hours

The interpretation of specific lithotypes and the synthesis of the stratigraphic record. Prerequisite(s): GEO 116.

GEO 310L. Stratigraphy Laboratory. 1 Hour
Course to accompany GEO 310. Two hours each week.

## GEO 401. Paleontology. 3 Hours

The study of ancient life. The morphology, ecology, evolution, and stratigraphic distributions of selected invertebrates, vertebrates, and plants.

## GEO 401L. Paleontology Laboratory. 1 Hour

Course to accompany GEO 401. Two hours each week.

## GEO 403. Sedimentology. 3 Hours

Detailed study of sediments: their sources, environments of deposition, and methods of consolidation. Emphasis on the interpretation of ancient sediments. Prerequisite(s): GEO 201.
GEO 403L. Sedimentology Laboratory. 1 Hour
Course to accompany GEO 403. Two hours each week.
GEO 404. Problems in Geology. 1-4 Hours
Consideration of special problems involving advanced work in the laboratory and library; arranged to meet the needs of individual students.

## GEO 411. Petrology. 3 Hours

Study of the formation of sedimentary, igneous, and metamorphic rocks. Prerequisite(s): GEO 201.

## GEO 411L. Petrology Laboratory. 1 Hour

Course to accompany GEO 411. Two hours each week. Prerequisite(s): GEO 201.

## GEO 412. Introductory Geochemistry. 3 Hours

Study of elementary thermodynamics, aqueous geochemistry, and principles governing the distribution of trace elements, radioisotopes and stable isotopes in igneous, metamorphic and sedimentary rocks. Emphasis on applications and solution of geological problems. Prerequisite(s): GEO 201 or permission of instructor.
GEO 412L. Introductory Geochemistry Laboratory. 1 Hour Course to accompany GEO 412. Three hours each week.
GEO 450. Applied Geographic Information Systems. 4 Hours Concepts and implementation of project design and analysis in geographic information systems (GIS). Students will learn the practice of GIS as a tool for spatial analysis, and as it applies in professional disciplines. The course will stress database design and present skills for data input, query analysis, and data output using GIS.
GEO 455. Envrionmental Remote Sensing. 4 Hours
Introduction to principles and concepts of remote sensing, a sophisticated technology of earth observation that provides fundamental data for global environmental investigation. Prerequisite(s): GEO 208 or permission of instructor.

## GEO 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## GEO 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.
GEO 479L. Envrionmental Instrumentation Laboratory. 2 Hours The understanding and use of field and laboratory based equipment to study current environmental issues. Emphasis on team-centered approaches to investigating environmental problems. Prerequisite(s): (BIO 151, BIO 152) or (GEO 115, GEO 116) or permission of instructor.
GEO 480. Senior Capstone Project \& Presentation. 3 Hours Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

## GEO 485. Geographic Information Systems Applications in Water Resources Planning \& Management. 4 Hours

An introduction to GIS applications in water resource management. Following an introduction to GIS basics, this course focuses on GIS techniques in surface water modeling and floodplain delineation and management.

## GEO 495. Geology Seminar. 1 Hour

Introduction to professional practices in the geosciences. Students will attend seminar talks by guest speakers, research career options and graduate programs in the earth sciences, develop a professional resume, and participate in other profession-building activities. May be repeated. Prerequisite(s): Permission of instructor.

## GEO 498. Geological Research \& Thesis. 4 Hours

Research project within an area of the geological sciences, including, but not limited to, environmental geology, geochemistry, geomorphology, or paleontology. The results are to be presented in a written thesis. Prerequisite(s): Permission of instructor.

## Global Languages and Cultures

Majors:

- Bachelor of Arts, French (p. 172)
- Bachelor of Arts, German (p. 173)
- Bachelor of Arts, Languages (p. 173)
- Bachelor or Arts, Spanish (p. 174)

Minors:
-French (p. 175)

- German (p. 175)
- Italian (p. 175)
- Spanish (p. 175)

The Department of Global Languages and Cultures offers instruction in Arabic, Chinese (Mandarin), French, German, Italian, Latin, Russian, and Spanish and thus brings a distinctively international perspective to the university community. The language programs focus on the development of proficiency in speaking, writing, reading, and listening, and integrate the study of literature, linguistics, business, and culture.

Each summer, faculty members in the Department of Global Languages and Cultures direct one-month language-immersion study programs in China, France, Germany, Italy, and Latin America or Spain (alternate years) in conjunction with the Center for International Programs (CIP). Participants in these programs can earn up to seven semester hours of language credit.

Students in B.A. programs can acquire teacher licensure in French, German, or Spanish through the E6 or E11A programs (see EDT). For details consult the department chairperson.

All new students who have previously studied their language of choice continue their study in courses in which all enrolled students are at approximately the same level of proficiency. Students' proficiency levels for the first enrollment in a language class are determined by the results of the department's two-phase placement examination. Credit, but not placement, is awarded for scores of three or higher on the Advanced Placement language examinations.

Students may choose a major (twenty-five semester hours at the 300level or higher) in a single language (French, German, or Spanish) or a composite major in two languages (one of which may be Italian). Many students combine a major in the department with a major in another discipline.

A minor in French, German, Italian, or Spanish consists of twelve semester hours at the 300-level or higher.

Courses beyond the 100 -level in Latin and Russian are not offered on a regular basis. Please consult the department chairperson for details.

## Faculty

Francisco Peñas-Bermejo, Chairperson
Professors Emeriti: Chiodo, Conard, O'Meara, Romaguera
Professors: Castro, Peñas-Bermejo
Visiting Professor: Wang
Associate Professors: Espinoza, Krugh, Mosher
Assistant Professors: Costales, Ventura, Work
Lecturers: Figueroa, Navarro, Schellhammer, Tanova, Tello-Sánchez, Williams

## Bachelor of Arts with a major in French (frn) Minimum 124 Hours

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humanities Commons ${ }^{1}$ |  | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |


| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable |
| :--- | :--- |
| credit |  |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice
Major Capstone

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements 25
FRN 311 French Conversatn I 3
(p. 171)
or FRN 312 Frnch Conversatn II
(p. 171)

FRN 321 Frn Composition I 3
(p. 171)
or FRN 322 Frn Composition II
(p. 171)

LNG $495 \quad$ Lang in Careers (Satisfies CAP Major Capstone) 1
(p. 171)

Select two courses from: (at least one must be in literature) 6
FRN 341 Frn Culture \& Civ
(p. 171)

FRN 360 Explicatn De Textes
(p. 171)

FRN 361 Survey-French Lit I
(p. 171)

FRN 362 Survey-French Lit II
(p. 171)

FRN $381 \quad$ History-Frn Cinema
(p. 171)

FRN 450 French Literature
(p. 171)

FRN 452 Old Wrld Meets New
(p. 171)

Select four FRN courses (300/400 level) ${ }^{1}$
12

## Breadth

| ASI 150 Intr to the Univ Exp | 1 |
| :--- | ---: |
| (p. 171) | 124 |

1 Only one literature in translation course may count toward the major. Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification.

## Bachelor of Arts with a major in German (ger) Minimum 124 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3

ENG 200 Writing Seminar II
Oral Communication 3
$\begin{array}{rrr}\text { CMM } 100 & \text { Principles of Oral Communication } & 3\end{array}$
Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |


| Faith Traditions |  |
| :--- | ---: |
| Practical Ethical Action |  |
| Inquiry | variabl |
| Integrative | credit |
| Advanced Study |  |
| Philosophy and/or Religious Studies | 3 |
| Historical Studies | $0-3$ |
| Diversity and Social Justice |  |
| Major Capstone |  |


| 1 Completed with ASI 110 and ASI 120. |  |  |
| :---: | :---: | :---: |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |  |
| 3 Completed with ENG 200H or ASI 120. |  |  |
| Liberal Studies Curriculum |  |  |
| Creative and Performing Arts (May include CAP Arts) |  |  |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3 |  |  |
| Natural Sciences (Satisfies CAP Natural Science) 11 |  |  |
| Social Sciences (Includes CAP Social Science) 12 |  |  |
| Major Requirements 25 |  |  |
| GER 311 Ger Conversation I <br> (p. 171)  <br> or GER 312 Ger Conversation II <br> (p. 171)  |  |  |
|  |  |  |
| GER 321 <br> (p. 171) | Ger Composition I | 3 |


| or GER 322 <br> (p. 171) | Ger Composition II |  |
| :---: | :---: | :---: |
| LNG 495 <br> (p. 171) | Lang in Careers (Satisfies CAP Major Capstone) | 1 |
| Select two cour | s from: (at least one must be in literature) | 6 |
| GER 341 <br> (p. 171) | Ger Culture\&Civilzn |  |
| GER 361 <br> (p. 171) | Survey of Ger Lit I |  |
| GER 362 <br> (p. 171) | Survey of Ger Lit II |  |
| GER 450 <br> (p. 171) | German Literature |  |
| Select four G | courses (300/400 level) ${ }^{1}$ | 12 |
| Breadth |  |  |
| ASI 150 <br> (p. 171) | Intr to the Univ Exp | 1 |
| Total Hours to | al at least | 124 |
| 1 Only one literature in translation course may count toward the major. Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification. |  |  |
| Bachelor of Arts with a major in |  |  |
| Languages (lng) Minimum 124 Hours |  |  |

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$
ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3

Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study
variable credit
Philosophy and/or Religious Studies
Historical Studies

| Diversity and Social Justice | 3 |
| :--- | ---: |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts) 3

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12

## Major Requirements ${ }^{1}$

LNG $495 \quad$ Lang in Careers (Satisfies CAP Major Capstone) 1 (p. 171)

Composite major in Language ${ }^{2} 24$

| Breadth |  |  |
| :--- | ---: | ---: |
| ASI 150 | Intr to the Univ Exp | 1 |
| (p. 171) | 124 |  |

1 Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification.
2 Upper-level courses to total twenty-four semester hours distributed between two languages. Courses must include at least one three-semester-hour literature course, not including literature in translation. (Only one literature in translation may count toward the major.)

## Bachelor of Arts with a major in Spanish (spn) Minimum 124 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3

| CMM 100 Principles of Oral Communication |  |
| :--- | :--- |
| Mathematics | 3 |

Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable credit

| Integrative |  |
| :--- | :--- |
| Advanced Study | variable |
|  | credit |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements 25

| LNG 495 | Lang in Careers (Satisfies CAP Major Capstone) | 1 |
| :--- | :--- | :--- |
| (p. 171) |  |  |

SPN 311 Spn Conversation I 3
(p. 171)
or SPN 312 Spn Conversation II
(p. 171)
SPN 321 Spn Composition I 3
(p. 171)
or SPN 322 Spn Composition II
(p. 171)

Select two courses from: (at least one must be in literature) 6

| $\begin{aligned} & \text { SPN } 341 \\ & (\mathrm{p} .171) \end{aligned}$ | Spanish Cult\&Civ |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { SPN } 342 \\ & \text { (p. 171) } \end{aligned}$ | Ibero-Amer Cult \& Civ |  |
| SPN 361 <br> (p. 171) | Survy-Spanish Lit I |  |
| SPN 362 <br> (p. 171) | Survy-Spanish Lit II |  |
| SPN 363 <br> (p. 171) | Surv Spn Am Lit I |  |
| $\begin{aligned} & \text { SPN } 364 \\ & \text { (p. 171) } \end{aligned}$ | Surv Spn Am Lit II |  |
| $\begin{aligned} & \text { SPN } 450 \\ & (p .171) \end{aligned}$ | Spanish Literature |  |
| $\begin{aligned} & \text { SPN } 451 \\ & \text { (p. 171) } \end{aligned}$ | Spn-Amer Literature |  |
| $\begin{aligned} & \text { SPN } 471 \\ & (\text { p. 171) } \end{aligned}$ | TP:Spn Lit-20th Cent |  |
| SPN 472 <br> (p. 171) | Spn Lit-20th Cent II |  |
| Select four SPN courses (300/400 level) ${ }^{1}$ |  | 12 |

Breadth

| ASI $150 \quad$ Intr to the Univ Exp | 1 |
| :--- | ---: |
| (p. 171) | 124 |

1 Only one literature in translation course may count toward the major. Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification.

## Minor in French (frn)

French

| Select four FRN courses (300/400 level) | 12 |
| :--- | :--- |
| Total Hours | 12 |

## Minor in German (ger)

## German

| Select four GER courses (300/400 level) | 12 |
| :--- | :--- |
| Total Hours | 12 |

## Minor in Italian (ita)

Italian

| Select four ITA courses (300/400 level) | 12 |
| :--- | :--- |
| Total Hours | 12 |

## Minor in Spanish (spn)

Spanish

| Select four SPN courses (300/400 level) | 12 |
| :--- | :--- |
| Total Hours | 12 |

## Arabic Courses

ARA 101. Basic Proficiency in Arabic I. 4 Hours
Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Arabic or have placed in this course by examination.

ARA 141. Basic Proficiency in Arabic II. 4 Hours
Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): ARA 101 or placement by examination.

## ARA 201. Intermediate Arabic I. 4 Hours

Expansion and extension of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): ARA 141 or placement by examination.

ARA 202. Intermediate Arabic II. 4 Hours
Continued development of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Prerequisite(s): ARA 201 or placement by examination.

## Chinese Courses

CHI 101. Basic Proficiency in Mandarin Chinese I. 4 Hours Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Mandarin Chinese or have placed into this course by examination.
CHI 141. Basic Proficiency in Mandarin Chinese II. 4 Hours Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): CHI 101 or placement by examination.

## CHI 170. Study Abroad. 3 Hours

Study in a foreign country/region whose everyday language is Chinese, focusing on the culture and civilization of the country. Conducted in English. Available only during the summer session. Repeatable when topic and content change. Prerequisite(s): CHI 101 (may be taken as a corequisite).

## CHI 201. Intermediate Mandarin Chinese I. 4 Hours

Expansion and extension of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): CHI 141 or placement by examination.

## CHI 202. Intermediate Mandarin Chinese II. 4 Hours

Continued development of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Prerequisite(s): CHI 201 or placement by examination.

CHI 391. Directed Study. 1-3 Hours
Guided study on selected topics and/or issues involving language proficiency, literature, linguistics or culture under the supervision of an instructor. Admission to this course and number of semester hours require approval of the chairperson. May be repeated when topic changes. Prerequisite(s): CHI 202; permission of department chairperson.

## French Courses

FRN 101. Basic Proficiency in French I. 4 Hours
Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied French or have placed into this course by examination.

## FRN 131. Intensive Fundamental French. 2 Hours

Intensive development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: FRN 101 or FRN 131.

## FRN 141. Basic Proficiency in French II. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (FRN 101 or FRN 131) or placement by examination.

## FRN 201. Intermediate French I. 3 Hours

Development of reading, listening, writing, and speaking skills. Language laboratory required. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): FRN 141.

## FRN 202. Intermediate French II. 3 Hours

Development of reading, listening, writing, and speaking skills. Language laboratory required. Prerequisite(s): FRN 201.
FRN 270. Intermediate Study Abroad. 1-7 Hours
Intermediate intensive study in a foreign country/region whose everyday language is French. Instruction in language, culture and civilization. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): FRN 141 or equivalent.

## FRN 311. French Conversation I. 3 Hours

Intensive practice in speaking French to develop oral communication skills. Emphasis on vocabulary development, listening comprehension, simulation of life-like situations, and discussions on French life and culture. Prerequisite(s): FRN 202.

## FRN 312. French Conversation II. 3 Hours

Intensive practice in speaking French to develop oral communication skills. Emphasis on vocabulary development, listening comprehension, simulation of life-like situations, and discussions on French life and culture. Prerequisite(s): FRN 202.
FRN 321. French Composition I. 3 Hours
Practice in composition on topics dealing with French life and culture. Systematic vocabulary enrichment, refinement of grammar, and assimilation of stylistic patterns. Emphasis on correct writing and creativity. Initiation into the concept of style in French prose. Prerequisite(s): FRN 311 or FRN 312.

## FRN 322. French Composition II. 3 Hours

Practice in composition on topics dealing with French life and culture. Systematic vocabulary enrichment, refinement of grammar, and assimilation of stylistic patterns. Emphasis on correct writing and creativity. Initiation into the concept of style in French prose. Prerequisite(s): FRN 311 or FRN 312.

FRN 325. Introduction to Commercial French. 3 Hours
Introduction to French business and the French position in international trade. Basic vocabulary of the office and the world of trade, introduction to formal correspondence and transactions. Prerequisite(s): FRN 311 or FRN 312.

## FRN 341. French Culture \& Civilization. 3 Hours

Introduction to the history of French civilization with emphasis on the arts and life in each major cultural period. Recommended for all French majors and minors. Prerequisite(s): FRN 311 or FRN 312.

FRN 350. French Literature in Translation. 3 Hours
Course to acquaint students with major topics in French and Francophone literature. Conducted in English. Repeatable when subtitle and content change.

FRN 352. Old World Meets New (ENG). 3 Hours
Readings of (1) non-fictional narratives regarding French encounters with American Indians in the sixteenth and seventeenth centuries and (2) literary and philosophical works on this topic. Conducted in English. Students receive credit for either FRN 352 or FRN 452, not both.

FRN 360. Explication De Textes. 3 Hours
Introduction to method of analyzing literary texts, both prose and poetry. Elements of French versification. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

## FRN 361. Survey of French Literature I. 3 Hours

Major texts, trends, authors from the Middle Ages to the present, showing influences and continuity. Lectures, discussions, oral and written reports. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

## FRN 362. Survey of French Literature II. 3 Hours

Major texts, trends, authors from the Middle Ages to the present, showing influences and continuity. Lectures, discussions, oral and written reports. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

## FRN 370. Advanced Study Abroad. 1-7 Hours

Advanced intensive study in a foreign country/region whose everyday language is French, treating its language, culture, and civilization. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): FRN 202 or equivalent.

## FRN 381. History of French Cinema. 3 Hours

Survey of the trends, styles, and principal directors in the history of French cinema. Discussion of personal, social, and cultural values portrayed in films. Prerequisite(s): FRN 311 or FRN 312.

## FRN 450. French Literature. 3 Hours

Lectures and discussion concentrating on specialized genres, periods, or authors. Repeatable when subtitle and content change. Prerequisite(s): FRN 311 or FRN 312.

## FRN 452. Old World Meets New (FRN). 3 Hours

Readings of (1) non-fictional narratives regarding French encounters with American Indians in the sixteenth and seventeenth centuries and (2) literary and philosophical works on this topic. Conducted in French. Students receive credit for either FRN 352 or FRN 452, not both. Prerequisite(s): FRN 311 or FRN 312.

## FRN 469. French Linguistics. 3 Hours

Synchronic analysis of modern French language, including a contrast of the French sound system, morphology, and syntax with English structures; the historical derivation of French, creolization, and approaches to teaching French to English-speaking persons. Conducted in French. Prerequisite(s): (FRN 311 or FRN 312); LNG 468.

## FRN 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## FRN 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation wit the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## FRN 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of the chairperson. Prerequisite(s): FRN 202; permission of department chairperson.

## German Courses

## GER 101. Basic Proficiency in German I. 4 Hours

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied German or have placed into this course by examination.

## GER 131. Intensive Fundamental German. 2 Hours

Field-based course examining the geologic history of the Miami Valley and Dayton area; processes leading to the modern landscape; the impact of human activity will be assessed. Prerequisite(s): GEO 109 or GER 115 or permission of instructor.

## GER 141. Basic Proficiency in German II. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (GER 101 or GER 131) or placement by examination.

## GER 201. Intermediate German I. 3 Hours

Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Exposure to the development of German civilization and culture. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): GER 141.

## GER 202. Intermediate German II. 3 Hours

Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Exposure to the development of German civilization and culture. Prerequisite(s): GER 201.

## GER 311. German Conversation I. 3 Hours

Practice to increase listening comprehension and fluency in speaking about topics from the personal and everyday to issues of current interest with focus on describing and narrating in paragraph-length structures. In-depth exploration of cultural commonalities and differences between the German-speaking countries and the United States. Focus on development of vocabulary and practice of expressions essential for oral communication. May be taken in either sequence. Prerequisite(s): GER 202.

## GER 312. German Conversation II. 3 Hours

Practice to increase listening comprehension and fluency in speaking about topics from the personal and everyday to issues of current interest with focus on describing and narrating in paragraph-length structures. In-depth exploration of cultural commonalities and differences between the German-speaking countries and the United States. Focus on development of vocabulary and practice of expressions essential for oral communication. May be taken in either sequence. Prerequisite(s): GER 202.

## GER 321. German Composition I. 3 Hours

Practice in personal and topical writing in German that seeks to develop the ability to write well-structured paragraphs. Systematic vocabulary building and grammatical refinement and review. Readings on key issues of the day and/or topics providing crucial insight into German and European thinking and concerns. May be taken in either sequence. Prerequisite(s): GER 311 or GER 312.

## GER 322. German Composition II. 3 Hours

Practice in personal and topical writing in German that seeks to develop the ability to write well-structured paragraphs. Systematic vocabulary building and grammatical refinement and review. Readings on key issues of the day and/or topics providing crucial insight into German and European thinking and concerns. May be taken in either sequence. Prerequisite(s): GER 311 or GER 312.

## GER 325. Commercial German. 3 Hours

Introduction to the business language, customs, and economic profile of the German-speaking countries. Vocabulary of the office and world of trade. Business correspondence. Germany's economic and cultural position and goals within the context of the European Union and the world. Course provides an introduction to working in an international business setting. Prerequisite(s): GER 311 or GER 312 or equivalent.

GER 341. German Culture \& Civilization. 3 Hours
Introduction to German culture and civilization with emphasis on the arts, intellectual developments, and life in various periods of German history. Conducted in German. Prerequisite(s): GER 311 or GER 312.

## GER 342. Germany and the New Europe. 3 Hours

Examination of developments in the life and culture, and the political, economic, and social realities in Germany from the end of WWI to the reunited country of today which is the largest member of EU. Course also explores the ideas and ideals on which the EU is founded, its present influence in the world, and how this new Europe differs from the United States of America. Conducted in German. Prerequisite(s): (GER 311 or 312) or equivalent.

## GER 350. German Literature \& Civilization. 3 Hours

Course to acquaint students with major German writers and literary movements. Conducted in English. Repeatable when subtitle and content change.

## GER 351. German Film. 3 Hours

Introduction to the aesthetic and thematic richness of German film. Students will study the cinema of the Weimar Republic within its historical context and its appropriation by Hollywood. This course will also introduce cross-cultural films having to do with idenity, women, immigrant workers, asylum seekers, postcolonialization, nationalism, social theory, ideology, and political activism. Prerequisite(s): GER 311 or GER 312.

## GER 361. Survey of German Literature I. 3 Hours

German literary works from 1750 to the present reflecting the philosophy, aesthetics, and concerns of the time. Skills development for reading literary and cultural texts and writing on analytic and interpretative topics. May be taken in either sequence. Prerequisite(s): ((GER 311 or GER 312); (GER 321 or GER 322)) or equivalent.

## GER 362. Survey of German Literature II. 3 Hours

German literary works from 1750 to the present reflecting the philosophy, aesthetics, and concerns of the time. Skills development for reading literary and cultural texts and writing on analytic and interpretative topics. May be taken in either sequence. Prerequisite(s): ((GER 311 or GER 312); (GER 321 or GER 322)) or equivalent.

## GER 370. Study Abroad. 1-6 Hours

Intensive study in a foreign country whose everyday language is German, treating the culture and civilization of the country. Conducted in German. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): GER 202.

## GER 450. German Literature. 3 Hours

Lectures and discussions in German in such specialized areas as Medieval lyric, Romanticism, twentieth-century novel, modern drama, and individual authors. Repeatable when subtitle and content change. Prerequisite(s): GER 311 or GER 312.

## GER 469. German Linguistics. 3 Hours

Synchronic analysis of modern German language, including a contrast of the German sound system, morphology, and syntax with English structures; the historical derivation of German, the modern German dialects, and approaches to teaching German to English-speakers. Conducted in German. Prerequisite(s): (GER 311 or 312); LNG 468.

## GER 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## GER 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## GER 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): GER 202; permission of instructor.

## Hindi Courses

HND 101. Beginning Hindi I. 3 Hours

Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to HND 101 restricted to those who have not studied Hindi or have placed into that course by examination. Offered only in India in connection with the B.A. Program in Philosophy. Credit is granted for only one of the following: HND 101, HND 102 or HND 121.

## HND 102. Beginning Hindi II. 3 Hours

Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to HND 102 is open only to those who have successfully completed 101. Offered only in India in connection with the B.A. Program in Philosophy. Credit is granted for only one of the following: HND 101, HND 102 or HND 121.

## HND 121. Elementary Hindi. 4 Hours

Review and further development of fundamental communication skills in reading, listening, writing, and speaking. Admission restricted to those who have studied the language for at least two years and place into the course by examination. Offered only in India in connection with the B.A. Program in Philosophy. Credit granted for only one of the following: HND 101 and HND 102 or HND 121.

## HND 141. Basic Proficiency in Hindi. 3 Hours

Further development of communication skills in reading, listening, writing, and speaking. Admission by examination or successful completion of HND 102 or HND 121. Successful completion of this course includes the demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. Offered only in India in connection with the B.A. Program in Philosophy.

## HND 201. Intermediate Hindi I. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern prose and poetry; brief essays in Hindi. Offered only in India in connection with the B.A.. Program in Philosophy. Prerequisite(s): HND 141; previous study of elementary Hindi in school or elsewhere; ability to speak, read, understand, and write simple Hindi.

## HND 202. Intermediate Hindi II. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern prose and poetry; brief essays in Hindi. Offered only in India in connection with the B.A.. Program in Philosophy. Prerequisite(s): HND 201.

## Italian Courses

## ITA 101. Beginning Italian I. 4 Hours

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Italian or have placed into this course by examination.

## ITA 141. Basic Proficiency in Italian. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): ITA 101 or placement by examination.

## ITA 170. Study Abroad. 3 Hours

Study in a foreign country/region whose everyday language is Italian, focusing on the culture and civilization of the country. Conducted in English. Available only during the summer session. Repeatable when topic and content change. Prerequisite(s): ITA 101 (may be taken as a corequisite).

## ITA 201. Intermediate Italian I. 3 Hours

Development of reading, listening, writing, and speaking skills. Conversation practice, oral reports, reading assignments, composition assignments, and grammar exercises. The course is conducted in Italian. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): ITA 141.

## ITA 202. Intermediate Italian II. 3 Hours

Development of reading, listening, writing, and speaking skills. Conversation practice, oral reports, reading assignments, composition assignments, and grammar exercises. The course is conducted in Italian. Prerequisite(s): ITA 201.

## ITA 313. Communicating in Italian I. 3 Hours

Intensive practice in speaking and writing Italian at an advanced level. Emphasis on building vocabulary, learning correct idiomatic usage, increasing fluency, and improving syntax and style. The course is conducted in Italian. ITA 313 and 314 may be taken in either sequence. Prerequisite(s): ITA 202.

## ITA 314. Communicating in Italian II. 3 Hours

Intensive practice in speaking and writing Italian at an advanced level. Emphasis on building vocabulary, learning correct idiomatic usage, increasing fluency, and improving syntax and style. The course is conducted in Italian. ITA 313 and 314 may be taken in either sequence. Prerequisite(s): ITA 202.

## ITA 341. Italian Culture \& Civilization I. 3 Hours

Survey of the major historical and cultural events in Italy from the Middle Ages to the present. All readings, lectures, discussions, reports, and tests are in Italian. ITA 341 and 342 may be taken in either sequence. Prerequisite(s): ITA 202.
ITA 361. Survey of Italian Literature I. 3 Hours
Italian literature from its beginnings in the thirteenth century to the present. Principal writers and literary trends; the techniques of literary analysis. Lectures, discussions, readings, and papers are in Italian. ITA 361 and ITA 362 may be taken in either sequence. Prerequisite(s): ITA 202.

## ITA 362. Survey of Italian Literature II. 3 Hours

Italian literature from its beginnings in the thirteenth century to the present. Principal writers and literary trends; the techniques of literary analysis. Lectures, discussions, readings, and papers are in Italian. ITA 361 and ITA 362 may be taken in either sequence. Prerequisite(s): ITA 202.

ITA 491. Study Abroad. 1-3 Hours
Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): ITA 202 or permission of instructor.

## Languages Courses

## LNG 101. Beginning Language Study. 4 Hours

Development of fundamental communication skills in reading, listening, writing, and speaking with a focus on basic proficiency in survival communication, and familiarization with culture in languages other than those regularly taught in the Department of Languages. May be offered through distance learning or study abroad with the support of the Department of Languages. No previous study of the language is presupposed (for LNG 101 only). Offered with different suffixes according to the language studied.
LNG 141. Basic Proficiency in Language. 4 Hours
Further development of communication skills in reading, listening, writing, and speaking with a focus on basic proficiency in survival communication, and familiarization with culture in languages other than those regularly taught in the Department of Languages. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 101 in the same language or equivalent.

## LNG 201. Intermediate Language I. 4 Hours

Expansion and extension of listening, speaking, reading, and writing skills through conversation practice, reading assignments, composition assignments, and grammar exercises. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 141 in the same language or equivalent.

## LNG 202. Intermediate Language II. 4 Hours

Continued development of proficiency in listening, speaking, reading and writing through conversation practice, reading assignments, composition assignments, and grammar exercises. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 201 in the same language or equivalent.
LNG 320. Instructed Second Langauge Acquisition. 2 Hours
Study of cognitive, linguistic, sociolinguistic, and constructivist approaches to instructed second language acquisition, including the relationship between classroom interaction and language acquisition.
LNG 330. Teaching World Languages in the Elementary School (PK-6). 4 Hours
An introduction to the pedagogical, philosophical, and psychological aspects of teaching foreign languages in elementary school. Topics: national and state standards, learners with special needs, reading in the foreign language, and professional associations. Prerequisite(s): EDT 110; at least two 300-level courses in the language to be taught.
LNG 468. Introduction to Linguistics. 3 Hours
Survey of the various aspects of a scientific description of human language: phonetics, phonology, morphology, syntax, semantics, and pragmatics. Interdisciplinary exploration of the reciprocal impact of linguistics on psychology, sociology, and language acquisition theory. Prerequisite(s): CMM 110 or equivalent; ENG 102 or equivalent.

## LNG 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## LNG 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.
LNG 495. The Language Major in Professional Careers. 1 Hour Exploration of life-long learning opportunities to maintain and increase functional proficiency in the language studied; the relationship between language proficiency and cross-cultural studies and the application of language proficiency in the work place; determination of the student's proficiency-level at the conclusion of the undergraduate experience.
Required of declared majors in languages (FRN, GER, LNG, and SPN). Taught in English. Prerequisite(s): Completion of 18 credit hours of upper-division courses in language major.

## Latin Courses

## LAT 101. Basic Proficiency in Latin I. 4 Hours

Development of basic skills in reading, listening, and writing through extensive practice in language use. Admission is restricted to those who have not studied Latin or have placed into this course by examination.

## LAT 131. Intensive Fundamental Latin. 2 Hours

Intensive development of fundamental skills in reading, listening, and writing through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: LAT 101 or LAT 131.

## LAT 141. Basic Proficiency in Latin II. 4 Hours

Further development of fundamental skills in reading, listening, and writing through extensive practice in language use. Prerequisite(s): (LAT 101 or LAT 131) or placement by examination.

## LAT 201. Intermediate Latin I. 3 Hours

Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Virgil, or Ovid. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): LAT 141.

## LAT 202. Intermediate Latin II. 3 Hours

Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Virgil, or Ovid. Prerequisite(s): LAT 201.

## LAT 321. Latin Composition \& Syntax. 3 Hours

Practice in writing Latin, for enrichment of vocabulary, refinement of grammar, and control of major Latin prose styles. Prerequisite(s): LAT 202.

## LAT 350. Latin Literature. 3 Hours

Advanced readings in a particular author or genre (epic, drama, history, philosophy). Repeatable when subtitle and content change. Prerequisite(s): LAT 202.

## LAT 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): LAT 202 or permission of department chairperson.

## Russian Courses

RUS 101. Basic Proficiency in Russian I. 4 Hours
Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Russian or have placed into this course by examination.

## RUS 141. Basic Proficiency in Russian II. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): RUS 101 or placement by examination.

## RUS 201. Intermediate Russian I. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): RUS 141.

## RUS 202. Intermediate Russian II. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite(s): RUS 201.

## RUS 311. Russian Conversation I. 3 Hours

Vocabulary development, pattern drills, and the use of idioms in discussion and oral reports centered on Russian life and culture. RUS 311 and 312 may be taken in either sequence. Prerequisite(s): RUS 202.

## RUS 312. Russian Conversation II. 3 Hours

Vocabulary development, pattern drills, and the use of idioms in discussion and oral reports centered on Russian life and culture. RUS 311 and RUS 312 may be taken in either sequence. Prerequisite(s): RUS 202.

## RUS 321. Russian Composition. 3 Hours

Practice in composition on topics dealing with Russian life and culture; personal and business letters. Short weekly assignments to build vocabulary and control of idioms. Prerequisite(s): RUS 202.

RUS 361. Survey of Russian Literature. 3 Hours
Russian literature and its development during the nineteenth and twentieth centuries. Study of exemplary works and literary movements. Prerequisite(s): RUS 202.

## RUS 491. Independent Study. 1-6 Hours

Independent study under the guidance of an instructor. Admission to course and number of semester hours require approval of chairperson. Repeatable when content changes.

## Spanish Courses

## SPN 101. Basic Proficiency in Spanish I. 4 Hours

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Spanish or have placed into this course by examination.

## SPN 131. Intensive Fundamental Spanish. 2 Hours

Intensive development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: SPN 101 or SPN 131.

## SPN 141. Basic Proficiency in Spanish II. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (SPN 101 or SPN 131) or placement by examination.

## SPN 201. Intermediate Spanish I. 3 Hours

Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required.
Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): SPN 141.
SPN 202. Intermediate Spanish II. 3 Hours
Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required. Prerequisite(s): SPN 201.

## SPN 270. Study Abroad. 1-6 Hours

Intensive study in a foreign country whose everyday language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): SPN 141 or equivalent.

## SPN 311. Spanish Conversation I. 3 Hours

Development of fluency in the vocabulary and idioms of the spoken language through discussion of topics related to contemporary life in the Hispanic world. Prerequisite(s): SPN 202.

## SPN 312. Spanish Conversation II. 3 Hours

Development of fluency in the vocabulary and idioms of the spoken language through discussion of topics related to contemporary life in the Hispanic world. Prerequisite(s): SPN 311.

## SPN 321. Spanish Composition I. 3 Hours

Practice in composition on a variety of topics. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Emphasis on developing facility in writing clearly and correctly in Spanish. Prerequisite(s): SPN 311 or SPN 312.

## SPN 322. Spanish Composition II. 3 Hours

Practice in composition on a variety of topics. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Emphasis on developing facility in writing clearly and correctly in Spanish. Prerequisite(s): SPN 321.

## SPN 325. Commercial Spanish. 3 Hours

Introduction to commercial correspondence as a basis for developing skills in writing Spanish business letters and other correspondence. Prerequisite(s): SPN 311 or SPN 312.

## SPN 341. Spanish Culture \& Civilzation. 3 Hours

Readings and discussions on the historical, social, political, and cultural phenomena of Spain. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

## SPN 342. Ibero-American Culture \& Civilization. 3 Hours

Readings and discussions on the historical, social, political, and cultural phenomena of Ibero-America. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

## SPN 350. Hispanic Literature in Translation. 3 Hours

Course to acquaint students with major Spanish and Spanish-American writers and literary movements. Conducted in English. Repeatable when subtitle and content change.

SPN 361. Survey of Spanish Literature I. 3 Hours
Readings and analysis of the works of major Spanish authors and discussion of the principal literary trends in Spain from the Middle Ages to the twentieth century. Lectures, discussions, and assignments in Spanish. Prerequisite(s): SPN 311 or SPN 312.

## SPN 362. Survey of Spanish Literature II. 3 Hours

Readings and analysis of the works of major Spanish authors and discussion of the principal literary trends in Spain from the Middle Ages to the twentieth century. Lectures, discussions, and assignments in Spanish. Prerequisite(s): SPN 311 or SPN 312.

## SPN 363. Survey of Spanish-American Literature I. 3 Hours

Readings and analysis of the works of major Spanish-American authors and discussion of the principal literary trends in Spanish America from Discovery and Conquest through Realism and Naturalism. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

SPN 364. Survey of Spanish-American Literature II. 3 Hours
Readings and analysis of the works of major Spanish-American authors and discussion of the principal literary trends in Spanish America from Modernism through the present day. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

## SPN 370. Study Abroad. 1-6 Hours

Intensive study in a foreign country whose everyday language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): SPN 202.

## SPN 380. Spanish \& Ibero-American Cinema. 3 Hours

Introduction to cinematography and culture of Spanish and IberoAmerican countries, emphasizing themes related to human rights (Socioeconomic, class, sexuality, gender, ethnicity), as well as critical and theoretical perspectives on films from these regions. Conducted in English. Prerequisite(s): ENG 102 or equivalent.

## SPN 440. Spanish Sociolinguistics. 3 Hours

Analysis of the interrelations between linguistic practices and ideas in the Spanish-speaking world and the social contexts in which they develop. Topics examined include language contact, minority languages, and human rights; language policy and education planning; socially conditioned variation according to gender, class, and ethnicity; and linguistic ideologies and identities in Spain and Latin America. Conducted in Spanish. Prerequisite(s): SPN 321 or permission of department chairperson.

## SPN 450. Topics in Spanish Literature. 3 Hours

Lectures and discussions concentrating on specialized genres, periods, or authors of Peninsular literature prior to the twentieth century. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 311 or SPN 312.

## SPN 451. Topics in Spanish-American Literature. 3 Hours

Lectures and discussions concentrating on specialized genres, periods, or authors of Spanish-American literature prior to the twentieth century. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 311 or SPN 312.

## SPN 469. Spanish Linguistics. 3 Hours

Synchronic analysis of modern Spanish language, including a contrast of the Spanish sound system, morphology, and syntax with English structures; the historical derivation of Spanish, the modern Spanish dialects (Spain and Latin America), and approaches to teaching Spanish to English speakers. Conducted in Spanish. Prerequisite(s): LNG 468;
(SPN 311 or SPN 312).

## SPN 471. Topics in Spanish-American Literature of the Twentieth Century. 3 Hours

Lectures and discussions concentrating on specialized periods, genres, or authors of twentieth-century Peninsular literature. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 311 or SPN 312.

## SPN 472. Topics in Spanish-American Literature of the Twentieth

 Century II. 3 HoursLectures and discussions concentrating on specialized periods, genres or authors of twentieth-century Spanish-American literature. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 311 or SPN 312.

## SPN 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consulation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## SPN 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## SPN 480. Spanish \& Ibero-American Cinema. 3 Hours

Introduction to cinematography and culture of Spanish and IberoAmerican countries, emphasizing themes related to human rights (socioeconomic, class, sexuality, gender, ethnicity), as well as critical and theoretical perspectives on films from these regions. Conducted in Spanish. Prerequisite(s): SPN 312 or equivalent; SPN 342 recommended.

## SPN 491. Independent Study. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): SPN 202; permission of department chairperson.

## SPN 497. Service Learning Experience. 1-3 Hours

Supervised service experience or project which requires the use of Spanish. Repeatable up to a total of three semester hours. Prerequisite(s): SPN 311 or equivalent.

## History

Major:

- Bachelor of Arts, History (p. 182)

Minor:

- History (p. 183)

History critically studies the past and those key values which have shaped society. History also provides students with a sense of perspective and with the ability to make critical judgments. Those with a sharply honed historical consciousness know that often what appears to be a simple solution to a simple problem will not work
because unexpressed historical forces and traditions lie just beneath the surface. Therefore, historical consciousness helps to make the world comprehensible. To be ignorant of history is to be, in a very fundamental way, intellectually defenseless, unable to understand the workings of this or other societies. Thus all totalitarian societies have stringently controlled the study and writing of history. They recognize that a free mind needs to know its past, to debate and discuss how the world came to be as it is, in order to know what to defend and what to change and how to resist imposed ideologies.

Students majoring in history are offered a flexible curriculum that allows them to have a double major or one or more minors. Students are also strongly encouraged to develop interdisciplinary areas of concentration to meet their interests and vocational goals. Examples of areas of concentration are:

- Pre-law
- Business
- International Affairs
- Historical Administration
- Preservation
- Archival Management

History majors should consult the department chairperson for a departmental advising brochure and further details. History majors pursue professions in numerous fields including:

- Education
- Law and Government
- International Affairs
- Archives and Museums
- Communications
- Business

Students in B.A. programs can acquire teacher licensure through the E11A program (See EDT). For details, consult the department chairperson.

A history minor consists of eighteen semester hours.

## Faculty

Juan Santamarina, Chairperson
Distinguished Service Professor: Palermo
Professors Emeriti: Alexander, Eid, Palermo, Taylor
Professors: Amin, Bednarek, Heitmann, Morman, Schweikart, Trollinger
Associate Professors: Agnew, Cadegan, Carlson, Carter, Darrow,
Fleischmann, Flockerzie, Hume, Merithew, Santamarina
Assistant Professors: Borbonus, Reid, Roy
Lecturers: Bartley, Jaffe, Sextro, Sutherland, Uhlman, Washington

## Bachelor of Arts with a major in History (HSt) Minimum 124 Hours

| Common Academic Program (CAP) |
| :--- |
| *credit hours will vary depending on courses selected |
| First-Year Humanities Commons ${ }^{1}$ 12 <br> HST 103 The West \& the World <br> REL 103 Introduction to Religioius \& Theological Studies <br> PHL 103 Introduction to Philosophy <br> ENG 100 Writing Seminar I |


| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| :---: | :---: |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 Completed with ENG 200 H or ASI 120. |  |


| Liberal Studies Curriculum |  |
| :--- | :---: |
| Creative and Performing Arts (May include CAP Arts) | 3 |
| L2 Proficiency (Proficiency in a language other than English) | $0-11$ |
| Literature (May satisfy CAP Components) | 3 |
| Mathematics, exlcuding MTH 205 (Satisfies CAP Mathematics) | 3 |
| Natural Sciences (Satisfies CAP Natural Science) | 11 |
| Social Sciences (Includes CAP Social Science) | 12 |


| Major Requirements ${ }^{1}$ |  |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { HST } 103 \\ & \text { (p. 182) } \end{aligned}$ | West and the World | 3 |
| $\begin{aligned} & \text { HST } 150 \\ & \text { (p. 182) } \end{aligned}$ | Introduction to the Historian's Craft | 3 |
| $\begin{aligned} & \text { HST } 251 \\ & \text { (p. 182) } \end{aligned}$ | Amer Hst to $1865{ }^{2}$ | 3 |
| $\begin{aligned} & \text { or HST } 252 \\ & \text { (p. 182) } \end{aligned}$ | Amer Hst Since 1865 |  |
| $\begin{aligned} & \text { HST } 300 \\ & \text { (p. 182) } \end{aligned}$ | Career Dev-History | 1 |
| $\begin{aligned} & \text { HST } 301 \\ & \text { (p. 182) } \end{aligned}$ | Research Seminar | 3 |
| $\begin{aligned} & \text { HST } 498 \\ & \text { (p. 182) } \end{aligned}$ | History Capstone Seminar (Satisfies CAP Major Capstone) | 3 |

Select two courses from: 6

| HST 220 | Ancient History |
| :--- | :--- |
| (p. 182) |  |
| HST 260 | Asian History |
| (p. 182) |  |

$\begin{array}{ll}\text { HST } 280 & \text { Middle East History } \\ \text { (p. 182) }\end{array}$
Select 4 HST courses $(300 \text { level })^{3} \quad 12$
Select one HST seminar (400 level) ${ }^{4} 3$

## Breadth

ASI $150 \quad$ Intr to the Univ Exp 1
(p. 182)

Total Hours to total at least 124
1 Includes CAP components.
2 Students who are majoring in both History and Adolescence to Young Adult (AYA) Integrated Social Studies (History and Social Science) Education in the School of Education and Allied Professions are required to take both HST 251 and HST 252, and only one nonU.S. 200-level area survey.

3 These electives should be distributed so that the student will have taken history (HST) electives in three geographical areas: United States, Europe, and at least one of the following: Africa, Asia, Latin America, Middle East.
4 Three semester hours of the seminar requirement may be achieved through the fulfillment of an experiential component earned through completion of three semester hours of HST 495 Internship.

## Minor in History (hst)

## History

| $\begin{aligned} & \text { HST } 103 \\ & \text { (p. 182) } \end{aligned}$ | West and the World | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { HST } 251 \\ & \text { (p. 182) } \end{aligned}$ | Amer Hst to 1865 | 3 |
| or HST 252 (p. 182) | Amer Hst Since 1865 |  |
| Select two courses in American history (300/400 level) |  | 6 |
| Select two courses in Non-American history (300/400 level) |  | 6 |
| Total Hours |  | 18 |

## Courses

## HST 103. The West \& the World. 3 Hours

Survey of key themes in world history including the social, economic, cultural, political, and environmental forces that shaped the human past throughout the globe.

## HST 150. Introduction to the Historian's Craft. 3 Hours

Introduction for history majors to the fundamental aspects of professional history. Basic elements of this reading- and writing-intensive course include terminology, methods of critique, internal and external analysis, and interpretation. Prerequisite(s): HST 103 or equivalent.
HST 198. History Scholars' Seminar. 3 Hours
Study and seminar discussion of selected historical documents dealing with major events and trends in Western civilization since 1715. Open by permission only to first-year students in the Berry Scholars Program.

## HST 220. Survey of Ancient History. 3 Hours

Survey of ancient Mediterranean, Middle Eastern, and Chinese history with emphasis on the interaction among these regions and the overall impact of antiquity. Prerequisite(s): HST 103 or equivalent.

## HST 251. American History to 1865. 3 Hours

Survey of the development of the American nation from colonial times to 1865 ; political trends, economic and social foundations of American institutions. Prerequisite(s): HST 103 or equivalent.

## HST 252. American History Since 1865. 3 Hours

Survey of the development of the nation after the Civil War, stressing social, economic, and political problems. Prerequisite(s): HST 103 or equivalent.

## HST 260. Survey of Asian History. 3 Hours

Historical survey of the cultures and states of Asia, from the origins of agricultural civilization to the modern period. Prerequisite(s): HST 103 or equivalent.

## HST 280. Survey of Middle Eastern History. 3 Hours

Historical survey of the cultures and societies of the Middle East, from the rise of Islam to the modern period. Prerequisite(s): HST 103 or equivalent.

## HST 300. Career Development in History. 1 Hour

Exploration of career opportunities open to History majors, with special emphasis on strategic planning for a career, creating a job portfolio, and mastering the practical mechanics of job searching. Prerequisite(s): (HST 103 or equivalent); HST 301 (may be taken as a corequisite).

## HST 301. Research Methods Seminar. 3 Hours

Historical methods, philosophy, and introductory historiography, the last based on the professor's field of specialization. Required for all history majors. Prerequisite(s): HST 103 or equivalent.

## HST 302. History of Ancient Greece. 3 Hours

Survey of Greek history and culture from the Bronze Age to Alexander the Great. Prerequisite(s): HST 103 or equivalent.

## HST 303. History of the Roman Republic \& Empire. 3 Hours

Survey of Roman history with emphasis on the political, social, and institutional evolution of the Roman state and the organization and structure of the Roman Empire. Prerequisite(s): HST 103 or equivalent.

## HST 304. Ancient History \& Modern Ideology. 3 Hours

Study of the ways in which the Classical past affects the modern world with a particular emphasis on the way in which modern thinkers and societies have used classical antiquity to envision, create, sustain and evaluate national identities and other ideologies. Prerequisite(s): HST 103 or equivalent.

## HST 305. Medieval Europe. 3 Hours

European history from the fourth to the fifteenth century, including birth of Middle Ages; development of Christianity; Byzantine, Islamic, and Carolingian Empires; feudalism; Crusades; rise of universities; birth of national cultures. Prerequisite(s): HST 103 or equivalent.

## HST 307. Renaissance \& Reformation. 3 Hours

The development of European history from the fourteenth to the middle of the seventeenth century. Emphasis on the economic, political, social, and religious aspects of the Renaissance, Protestant Revolution, and Catholic Reformation. Prerequisite(s): HST 103 or equivalent.

## HST 308. Shakespeare's Worlds. 3 Hours

A concentrated analysis of the various worlds created in Shakespeare's plays and their interconnection with and depiction of the major elements of the historical world of early modern England. In the process of this integrated analysis, the Historical Study and Arts Study domains will be respected and taught as separate disciplines. This course is cross-listed with ENG 363. Prerequisite(s): HST 103 or equivalent.

HST 311. Old Regime Europe. 3 Hours
From the later Reformation to the era of the French Revolution: intellectual and cultural development; political, economic, and social trends of the Old Regime. Prerequisite(s): HST 103 or equivalent.

## HST 312. Age of Democratic Revolutions. 3 Hours

Historical analysis of the ideological, political, social and economic changes of the late eighteenth and early nineteenth centuries, emphasizing developments in France and Europe. Prerequisite(s): HST 103 or equivalent.

## HST 313. The Dual Revolution \& its Consequences - Europe 1815-1914. 3 Hours

Historical analysis of nineteenth century Europe emphasizing the ideological, political, economic and social consequences of the Industrial and French revolutions, commonly known as the Dual Revolution. Prerequisite(s): HST 103 or equivalent.

## HST 314. Modern Europe in Decline 1890-1945. 3 Hours

Historical study of the decline and fall of European civilization from the eve of World War I to the end of World War II, including an examination of political, economic, social, and cultural conditions. Prerequisite(s): HST 103 or equivalent.

## HST 315. Europe in the Postwar Era 1945-Present. 3 Hours

Historical survey of domestic and foreign politics, economics, society, and culture in postwar Europe (East and West) from 1945 to the present. Prerequisite(s): HST 103 or equivalent.

## HST 316. Beethoven \& His Era. 3 Hours

Survey of the music of Ludwig van Beethoven, including orchestral works and chamber music, opera, keyboard and sacred music; and a survey of the historical context in which Beethoven lived and worked - Europe and the Habsburg Empire of the late eighteenth and early nineteenth centuries, and especially Vienna, the Habsburg capital. Beethoven is the culmination of the High Classic style and also the first of a new generation of Romantic composers. Prerequisite(s): HST 103 or equivalent.

## HST 320. European Military History. 3 Hours

Survey of warfare on the European continent from classical Greece through World War II emphasizing military institutions, organization, weapons, and campaigns and the role of the military in society. Prerequisite(s): HST 103 or equivalent.

## HST 321. Modern France. 3 Hours

French history from the Bourbon Restoration to the present. Emphasis on political, socio-economic, and cultural factors. Prerequisite(s): HST 103 or equivalent.

## HST 322. History of England. 3 Hours

Major forces and trends in the history of England from the early medieval period to the present, including their influence on social history and literature. Prerequisite(s): HST 103 or equivalent.

## HST 323. Modern Germany. 3 Hours

Analysis of the development of the German state from 1848 through the period of unification, Second Empire, Weimar Republic, Third Reich, the post-World War II Germanies, to the present. Prerequisite(s): HST 103 or equivalent.

## HST 324. Comparative Nationalism. 3 Hours

Comparative study of the origins and consequences of national movements throughout the world. Attention given to the historiography of nationalism and the fate of the nation-state idea in a number of temporal, geographic, political and cultural settings. Prerequisite(s): HST 103 or equivalent.

## HST 325. History of Russia to 1860. 3 Hours

History of Kievan Russia and Orthodox Christianity, the Mongol Conquest, the rise of autocracy, reforms and rebellions, revolutionary movements, and the rise of the Empire to the Crimean War. Prerequisite(s): HST 103 or equivalent.

HST 326. Russia, The Soviet Union \& Beyond 1860-Present. 3 Hours Social, political, and cultural history of Russia from the great reforms of the late empire, through the wars, revolutions, and reconstructions of the Soviet Period, to the present. Prerequisite(s): HST 103 or equivalent.

## HST 327. National Cultures of the Soviet Union \& its Successor

 States. 3 HoursThe history of the formation of the Soviet Union and of national and cultural relations between the Russians and their Slavic, Baltic, Caucasus, Central Asian, and Siberian neighbors. Prerequisite(s): HST 103 or equivalent.

## HST 329. American and Middle East. 3 Hours

Study of American involvement in the Middle East from the late 18th century until the present day. Topics include political, diplomatic and military events, as well as cultural, social, and religious debates that have defined the mutual interaction between Americans and Middle Easterners. Prerequisite(s): HST 103 or equivalent.

## HST 330. History of East Asia to 1800. 3 Hours

Survey of East Asian history from the formation of ancient states to the establishment of the dynastic hegemonies of the seventeenth and eighteenth centuries. Analysis of social, political, and cultural change in East Asia through the intensive reading of Chinese, Japanese, and Korean primary sources in translation. Prerequisite(s): HST 103 or equivalent.

## HST 331. History of India. 3 Hours

Survey of the development of civilization on the Indian subcontinent from the first extant records (c. 2500 BCE) to post-Independence modern India in connection with the B.A. Program in Philosophy. Prerequisite(s): HST 103 or equivalent.

## HST 332. Modern Germany. 3 Hours

Study of the economic, political, social, and cultural developments of modern China and Japan from the eighteenth century to the present. Prerequisite(s): HST 103 or equivalent.

## HST 333. Modern Middle East. 3 Hours

Survey of the Ottoman Empire, Iran, Egypt, and the modern states of the Middle East, emphasizing the development of nationalism and the area's role in international politics. Prerequisite(s): HST 103 or equivalent.

## HST 334. History of the Palestinian-Isreali Conflict. 3 Hours

Study of the history of the Palestinian-Israeli conflict from its beginnings in the late nineteenth century up to the present, with emphasis on a variety of historical interpretations of the actions and perspectives of the different parties involved. Prerequisite(s): HST 103 or equivalent.

## HST 335. History of South Asia. 3 Hours

Survey of the major political, religious, cultural and economic developments on the Indian subcontinent over the past 500 years. Prerequisite(s): HST 103 or equivalent.

HST 336. History of Africa to the Nineteenth Century. 3 Hours
Study of African history from the emergence of Africa's ancient kingdoms to the end of the trans-Atlantic slave trade in the nineteenth century. Prerequisite(s): HST 103 or equivalent.

HST 337. History of Africa - 19th Century to Present. 3 Hours
Emphasis: colonialism and its impact, the growth of nationalism and the problems of contemporary Africa. Prerequisite(s): HST 103 or equivalent.

HST 338. State \& Secession in South Asia. 3 Hours
Survey of the failure of the nation-state and the rise of secessionist movements in South Asia since 1947. Prerequisite(s): HST 103 or equivalent.

## HST 340. History of Science. 3 Hours

Survey of the development of science from its origins in the ancient world to the present. Prerequisite(s): HST 103 or equivalent.
HST 341. Historical Perspectives on Science, Technology \& Society. 3 Hours
Historical study with an institutional focus of how science and sciencebased technology have interacted with American society from the Colonial era to the present. Central to this course is the genesis of mass production, its coupling with mass distribution, and the rise of the industrial research laboratory. Primary topics include the Industrial Revolution, the revolution in transport, the introduction of new technologies in the electrical, aviation, automotive, nuclear, petrochemical, and pharmaceutical industries, and the relationship between these science-based technologies and society. Prerequisite(s): HST 103 or equivalent.
HST 342. Environmental History of the Americas. 3 Hours
Comparison and contrast of the histories of conservationism and environmentalism in the United States, Canada and Latin America. Prerequisite(s): HST 103 or equivalent.

## HST 343. History of Civil Engineering. 3 Hours

Historical study of the development of civil engineering from the origins in the ancient world to the present. Prerequisite(s): HST 103 or equivalent.
HST 344. History of Science, Technology \& the Modern Corporation. 3 Hours
Historical study of the emergence of twentieth-century science-based industry. Prerequisite(s): HST 103 or equivalent.

## HST 346. History of American Aviation. 3 Hours

This course will examine the influence of aviation on the American culture, economy, and military. It will also highlight the development of aviation/aerospace technology. Prerequisite(s): HST 103 or equivalent.

HST 347. Sex, Race \& Science. 3 Hours
Examines the development of scientific research on sex, race, and human nature focusing especially on the biological and the human sciences. Topics will include race science, the study of sex and sexuality, evolutionary accounts of human development, and relations between science and society from 1700. Prerequisite(s): HST 103 or equivalent.

## HST 348. Life \& Technology. 3 Hours

Study of how conceptions of life and technology have been tied together in key historical periods: from the early modern era, the industrial age, and the information age. Topics include life and mechanical philosophy; energy, work and life; cybernetics; reproductive technologies and genetic engineering; bioinformatics; and automata and robots. Prerequisite(s): HST 103 or equivalent.

## HST 349. Technology \& the Culture of War. 3 Hours

Investigation of the role of invention and engineering as it has been related to defense and war throughout the ages, focusing on the interrelationship of policy, strategy, organization, and technology from a global perspective. Prerequisite(s): HST 103 or equivalent.

## HST 350. Gay \& Lesbian U.S. History. 3 Hours

Upper level survey course which traces the history and trajectory of Gay and Lesbian communities in the U.S. Prerequisite(s): HST 103.

## HST 351. American Women's \& Gender History. 3 Hours

Historical study of the changing roles of women in American society, including examination of men's and women's gender roles and the ways in which social, cultural, political, economic, legal, and polictical factors shape and change gender roles. Prerequisite(s): HST 103 or equivalent.

## HST 352. History of the American Family. 3 Hours

Survey of the historical development of American family life from the colonial period to the present. Prerequisite(s): HST 103 or equivalent.

HST 353. History of Women in European Societies. 3 Hours
Study of the changing roles of women in European societies from the roots of industrialization to the present. Prerequisite(s): HST 103 or equivalent.
HST 354. History of Women \& Gender in the Middle East. 3 Hours Study of the history of the evolving roles and status of women in Middle Eastern societies, from the early modern period to present. Prerequisite(s): HST 103 or equivalent.

## HST 355. American Urban History. 3 Hours

Historical analysis of community life in American society: the nature and development of small towns, cities, and suburbs; communal experience, social organizations, and political culture. Prerequisite(s): HST 103 or equivalent.

HST 356. Comparative History of Women in the Third World. 3 Hours Study of the comparative histories of women in Third World societies from a global perspective, using specific case studies of women in different societies around the world. Prerequisite(s): HST 103 or equivalent.
HST 357. Latin America in the Twentieth Century. 3 Hours Intensive examination of revolution and reaction in today's Latin America and the implications for those who formulate U.S. foreign policy. Prerequisite(s): HST 103 or equivalent.
HST 358. Social \& Cultural History of Latin America. 3 Hours Survey of social and cultural history of Latin America and the Caribbean from pre-Columbian times to the present. Emphasis on the interaction between the European colonizer and the Amerindian and African peoples of the hemisphere. Prerequisite(s): HST 103 or equivalent.
HST 359. History of American City Planning. 3 Hours
Historical analysis of efforts by Americans to shape the urban environment, focusing on the emergence of the discipline and profession of city planning. Includes examination of U.S. planning theories developed within a larger Atlantic community. Prerequisite(s): HST 103 or equivalent.

HST 360. U.S. Legal \& Constitutional History I. 3 Hours An analysis of the major developments in American legal and constitutional history from colonial beginnings through the Civil War. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social and political developments, on the other. Prerequisite(s): HST 103 or equivalent.
HST 361. U.S. Legal \& Constitutional History II. 3 Hours An analysis of the major developments in American legal and constitutional history from the Reconstruction era to the present. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social, and political developments, on the other. Prerequisite(s): HST 103 or equivalent.

## HST 365. American Films as History. 3 Hours

Study of the development of American values, myths, institutions, and perspectives through the use of films as a primary source. Prerequisite(s): HST 103 or equivalent.

HST 369. Civil War \& Reconstruction. 3 Hours
Remote and immediate causes of the Civil War; problems of North and South during the war; consequences of the war; efforts to create a new Union, 1865 to 1877; problems caused by those efforts. Prerequisite(s): HST 103 or equivalent.

## HST 370. Economic \& Business History of the United States. 3 Hours <br> Survey and analysis of American economic history, 1600 to present, primarily through a study of American business institutions and leaders. Includes analysis of major economic theories of history as well as case studies of entrepreneurs. Prerequisite(s): HST 103 or equivalent.

## HST 371. United States Working Class. 3 Hours

History of American workers - male and female, paid and unpaid, and free and slave - from the beginning of industrialization through the twentieth century. Prerequisite(s): HST 103 or equivalent.

HST 372. History of Religion in the United States. 3 Hours
Survey of religion in the United States from the colonial era to the present. Particular attention to the interaction of religion with other aspects of American society and culture. Prerequisite(s): HST 103 or equivalent.

## HST 373. American Military History. 3 Hours

Survey of American military affairs, including military, naval, and air campaigns, from early settlement to the present. Prerequisite(s): HST 103 or equivalent.

## HST 374. Ireland \& America. 3 Hours

Study of the cultural-historical background of both Scotch-Irish and Celtic Irish immigrants to America and how they influenced the varying reactions of the dominant Anglo-Saxon Protestantism of America. Prerequisite(s): HST 103 or equivalent.
HST 375. History of United States Foreign Relations. 3 Hours Foundations of foreign relations since 1750; the expansion of foreign relations during the continental expansion of the nineteenth century and the beginning of the extra-continental empire in 1898; special emphasis on the emergence of multifaceted and interconnected global foreign relations after 1898. Prerequisite(s): HST 103 or equivalent.

HST 376. Social \& Cultural History of the United States. 3 Hours Social and cultural development of the American people: growth of national spirit, impact of expansion, conflict over slavery, and problems of industrialization and urbanization. Prerequisite(s): HST 103 or equivalent.

## HST 377. Contemporary American History. 3 Hours

The immediate background of contemporary political, social, and economic problems, beginning with the impact of World War II on the United States. Prerequisite(s): HST 103 or equivalent.

HST 378. History of Global Immigrants to the United States. 3 Hours Survey of the impact immigrants have had on the social, political, cultural, and economic life in the United States from the colonial period to the present. Prerequisite(s): HST 103 or equivalent.

## HST 380. Native American History. 3 Hours

Historical and descriptive survey of the native peoples of North America. Prerequisite(s): HST 103 or equivalent.

## HST 382. History of Mexico. 3 Hours

Survey of Mexican history from pre-Columbian civilization to the present. Prerequisite(s): HST 103 or equivalent.

## HST 383. History of the Caribbean. 3 Hours

Study of the cultural, social, economic, and political history of the islands and the northern shore of South America in modern times, stressing areas that have gained independence or autonomy. Prerequisite(s): HST 103 or equivalent.

## HST 384. Economic History of Latin America. 3 Hours

Examination of the integration of Latin America into the world trading system and analysis of the twentieth century's successes and failures of export-led growth and industrialization. Prerequisite(s): HST 103 or equivalent.

## HST 385. The Atlantic World, 1492-1800. 3 Hours

Comparative look at the people and cultures of Europe, Africa and the Americas who collaborated in the colonization of the Americas. Topics to be covered will include: slavery, missionary work, virgin soil epidemics, frontier wars, gender and the invention of racial categories. Prerequisite(s): HST 103 or equivalent.

## HST 386. China in Revolution. 3 Hours

Study of the history of China's turbulent twentieth century, with a focus on the social, political and cultural impacts of the 1911 Revolution, the Communist Revolution in 1949, and the Cultural Revolution of the 1960s. Prerequisite(s): HST 103 or equivalent.

HST 391. American Architectural History \& Preservation. 3 Hours Career-oriented course offering a theoretical background in historical preservation and techniques used in identification, research, and recording of historic landmarks worthy of preservation as part of the community heritage. Prerequisite(s): HST 103 or equivalent.
HST 398. History of Blacks in the United States, 1526-1900. 3 Hours Study of the saga of black people in the U.S. from 1526 until 1900. Prerequisite(s): HST 103 or equivalent.
HST 399. History of Blacks in the United States Since 1900. 3 Hours Study of the saga of black people in the U.S. from 1900 to the present. Prerequisite(s): HST 103 or equivalent.

## HST 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## HST 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## HST 485. Seminar in American History. 3 Hours

Reading seminar concentrating on one historical topic in American history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

HST 486. Seminar in European History. 3 Hours
Reading seminar concentrating on one historical topic in European history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

## HST 487. Seminar in Latin American History. 3 Hours

A reading seminar concentrating on one historical topic in Latin American history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

## HST 488. Seminar in African History. 3 Hours

Reading seminar concentrating on one historical topic in African history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

## HST 490. Seminar in Histography. 3 Hours

Reading seminar concentrating on the various techniques and philosophies of history by which historians have done historical research. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

## HST 491. Seminar in Ancient History. 3 Hours

Reading seminar concentrating on one historical topic in ancient history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 301.

## HST 492. Seminar in Asian History. 3 Hours

Reading seminar concentrating on one historical topic in Asian history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 301.

## HST 493. Seminar in Middle Eastern History. 3 Hours

Reading seminar concentrating on one historical topic in Middle Eastern history for detailed analysis. May be repeated as topics change.
Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

## HST 495. Internship. 3 Hours

Practical and professional experience through work with approved organizations such as historical societies, architectural preservation boards, and business firms. Prerequisite(s): (HST 103 or equivalent); permission of supervising instructor.

## HST 496. Independent Study. 1-6 Hours

The study of a special topic to be mutually selected by the student and a history professor. Prerequisite(s): (HST 103 or equivalent); permission of department chairperson.

## HST 497. Honors Tutorial. 1-6 Hours

The study of a special topic to be selected by the instructor. Applicants will be admitted on the basis of academic record. May be repeated once. Prerequisite(s): HST 103 or equivalent.

## HST 498. History Capstone Seminar. 3 Hours

This seminar, required for all senior history majors, will explore the perspective and practices of the professional historian. To accomplish this students will demonstrate the ability to work critically with primary sources resulting in a scholarly project suited to their own professional goals. History majors only. Prerequisite(s): ASI 110, HST 103, HST 150, HST 301.

## HST 499. Topics in History. 1-6 Hours

Specific subtitles and descriptions to be announced in the composite and posted in the History department office. Prerequisite(s): HST 103 or equivalent.

## International Studies

Bachelor of Arts, International Studies

Concentrations:

- Cooperation and Change in the New Europe (p. 189)
- Global Economic Development (p. 190)
- Global Environmental Sustainability (p. 190)
- International Business (p. 191)
- International Journalism (p. 191)
- Migration (p. 192)
- Peace and Global Security (p. 192)


## Minor:

- International Studies (p. 193)

International studies is a multidisciplinary major designed to meet the needs of students seeking the broadly based international perspective required for successful careers in education, government, international business, law, national and homeland security, humanitarian relief, and NGOs, among others. The curriculum includes a core of required courses, a concentration, a foreign language requirement, an international and/or cross-cultural experiential component, and a senior capstone seminar. The experiential component may be satisfied through study abroad, internship, language immersion, service, or work experience. The Center for International Programs and the Center for Social Concern can assist students in identifying many of these opportunities.

A minor in international studies consists of twenty-one semester hours.

## International Studies Committee

Marybeth Carlson, Director
Agnew (History), Bilocerkowycz (Political Science), Brecha (Physics), Carlson (History), Dasgupta (Anthropology), Fleischmann (History), Forbis (Sociology), Goldman (Geology), Hudson (Political Science), Krugh (Languages), MacLachlan (Music), Poe (Philosophy)

## Bachelor of Arts with a major in International Studies (INS) Minimum 124 <br> Hours



| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |


| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variable |
| Advanced Study | credit |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

| Liberal Studies Curriculum | 3 |
| :--- | ---: |
| Creative and Performing Arts (May include CAP Arts) | 3 |
| Literature (May include CAP Components) | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) | 11 |
| Natural Sciences (Satisfies CAP Natural Science) | 3 |

Major Requirements: Foundation Requirements ${ }^{1}$ ..... 65
Includes CAP Components

| ANT 150 | Cultural Anthropolgy | 3 |
| :--- | :--- | :--- |
| (p. 188) |  |  |

(p. 188)
ANT 306 Culture and Power 3
(p. 188)
ECO 203 Prin of Microecon 3
(p. 188)

ECO 204 Prin of Macroecon 3
(p. 188)

INS 250 INS Research Methods ${ }^{2} \quad 1$
(p. 188)

INS $395 \quad$ Interntl Experience ${ }^{3} 1$
(p. 188)
or INS 495 Interntl Internship
(p. 188)

INS $499 \quad$ INS Senior Capstone (Satisfies CAP Major 3
(p. 188) Capstone)

POL 202 Intro Comp Politics 3
(p. 188)

REL 363 Faith \& Justice 3
(p. 188)

Select one course from:
ASI 110 The Roots and Development of Western Culture in (p. 188) a Global Context

HST 103 West and the World
(p. 188)

Select one course from:
3
PHL 358
Marxist Philosophy
(p. 188)

| $\begin{aligned} & \text { PHL } 370 \\ & \text { (p. 188) } \end{aligned}$ | Political Philosophy |  |
| :---: | :---: | :---: |
| Select one course from: |  | 3 |
| $\begin{aligned} & \text { POL } 101 \\ & \text { (p. 188) } \end{aligned}$ | Global Politics |  |
| $\begin{aligned} & \text { POL } 214 \\ & \text { (p. 188) } \end{aligned}$ | Intro-Intrntl Poltcs |  |
| Select one course from: |  | 3 |
| $\begin{aligned} & \text { HST } 375 \\ & \text { (p. 188) } \end{aligned}$ | US Foreign Relations |  |
| $\begin{aligned} & \text { POL } 408 \\ & \text { (p. 188) } \end{aligned}$ | Amer Foreign Policy |  |
| Select one course from: ${ }^{4}$ |  | 3 |
| $\begin{aligned} & \text { FRN } 341 \\ & \text { (p. 188) } \end{aligned}$ | Frn Culture \& Civ |  |
| FRN 361 <br> (p. 188) | Survey-French Lit I |  |
| FRN 362 <br> (p. 188) | Survey-French Lit II |  |
| FRN 381 <br> (p. 188) | History-Frn Cinema |  |
| FRN 450 <br> (p. 188) | French Literature |  |
| FRN 452 <br> (p. 188) | Old Wrid Meets New |  |
| $\begin{aligned} & \text { GER } 351 \\ & \text { (p. 188) } \end{aligned}$ | German Film |  |
| GER 361 <br> (p. 188) | Survey of Ger Lit I |  |
| GER 362 <br> (p. 188) | Survey of Ger Lit II |  |
| GER 450 <br> (p. 188) | German Literature |  |
| ITA 361 <br> (p. 188) | Survey-Italn Lit I |  |
| ITA 362 <br> (p. 188) | Survey-Italn Lit II |  |
| RUS 361 <br> (p. 188) | Survey-Russian Lit |  |
| SPN 361 <br> (p. 188) | Survy-Spanish Lit I |  |
| SPN 362 <br> (p. 188) | Survy-Spanish Lit II |  |
| SPN 363 <br> (p. 188) | Surv Spn Am Lit I |  |
| SPN 364 <br> (p. 188) | Surv Spn Am Lit II |  |
| SPN 380 <br> (p. 188) | Spn\&lbero-Amr Cinema |  |
| SPN 450 <br> (p. 188) | Spanish Literature |  |
| SPN 451 <br> (p. 188) | Spn-Amer Literature |  |
| SPN 471 <br> (p. 188) | TP:Spn Lit-20th Cent |  |


| SPN 472 | Spn Lit-20th Cent II |
| :--- | :--- |
| (p. 188) |  |
| SPN 480 | Spn\&Ibero-Amr Cinema |
| (p. 188) |  |

Foreign language appropriate to concentration ${ }^{5}$

## Select one concentration from:

| $\begin{aligned} & \text { HST } 315 \\ & \text { (p. 188) } \end{aligned}$ | Europe 1945-Present | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { POL } 320 \\ & \text { (p. 188) } \end{aligned}$ | Western Europe | 3 |
| $\begin{aligned} & \text { POL } 321 \\ & \text { (p. 188) } \end{aligned}$ | Russia\&New States | 3 |
| Select thr | es from: | 9 |


| HST 313 <br> (p. 188) | Europe 1815-1914 |
| :---: | :---: |
| HST 314 <br> (p. 188) | Europe 1890-1945 |
| $\begin{aligned} & \text { HST } 321 \\ & \text { (p. 188) } \end{aligned}$ | Modern France |
| $\begin{aligned} & \text { HST } 322 \\ & \text { (p. 188) } \end{aligned}$ | History of England |
| $\begin{aligned} & \text { HST } 326 \\ & \text { (p. 188) } \end{aligned}$ | Hst-Sov Un 1860-Pr |
| $\begin{aligned} & \text { HST } 327 \\ & \text { (p. 188) } \end{aligned}$ | Natnl Cult-Sov Union |
| $\begin{aligned} & \text { HST } 353 \\ & \text { (p. 188) } \end{aligned}$ | Hst-Wom in Eurp Soc |
| $\begin{aligned} & \text { POL } 331 \\ & \text { (p. 188) } \end{aligned}$ | Ntlsm \& Ethno Poltcs |
| $\begin{aligned} & \text { REL } 366 \\ & \text { (p. 188) } \end{aligned}$ | The Holocaust |
| $\begin{aligned} & \text { SOC } 435 \\ & \text { (p. 188) } \end{aligned}$ | Soc of Globalization |

Select one course from: 3

| $\begin{aligned} & \text { PHL } 352 \\ & \text { (p. 188) } \end{aligned}$ | Modern Philosophy |
| :---: | :---: |
| $\begin{aligned} & \text { PHL } 353 \\ & \text { (p. 188) } \end{aligned}$ | Kant\&19th Cent Phl |
| $\begin{aligned} & \text { PHL } 354 \\ & (\text { p. 188) } \end{aligned}$ | 20th Century Phl |
| $\begin{aligned} & \text { PHL } 358 \\ & \text { (p. 188) } \end{aligned}$ | Marxist Philosophy ${ }^{7}$ |
| $\begin{aligned} & \text { PHL } 360 \\ & \text { (p. 188) } \end{aligned}$ | Existentialism |
| $\begin{aligned} & \text { PHL } 370 \\ & \text { (p. 188) } \end{aligned}$ | Political Philosophy ${ }^{7}$ |
| $\begin{aligned} & \text { POL } 319 \\ & \text { (p. 188) } \end{aligned}$ | 20th Cent Pol Thgt |

Select one course from: 3
VAH 203 Survey of Art III
(p. 188)

VAH 450 Itl Renaissance Art
(p. 188)

| VAH 480 | 20th Century Art I |
| :--- | :--- |
| (p. 188) |  |
| VAH 483 <br> (p. 188) |  |

$\left.\begin{array}{llr}\text { Concentration: Global Economic Development } & \\ \begin{array}{lll}\text { ECO } 460 \\ \text { (p. 188) }\end{array} & \text { Eco Develop \& Growth }\end{array}\right)$

Select one course from: 3

| PHL 355 <br> (p. 188) | Asian Philosophy |
| :--- | :--- |
| PHL 363 | African Philosophy |
| (p. 188) |  |
| PHL 365 <br> (p. 188) | Islamic Phl\& Culture |
| REL 304 | Hinduism |
| (p. 188) |  |
| REL 305 | Eastern Orthodoxy |
| (p. 188) |  |
| REL 306 <br> (p. 188) | Buddhism |
| REL 308 | Islam |
| (p. 188) |  |

Select one course from: 3

| ANT 356 | Cultures of Africa |
| :--- | :--- |
| (p. 188) |  |
| HST 326 <br> (p. 188) | Hst-Sov Un 1860-Pr |
| HST 330 <br> (p. 188) | Hst E Asia to 1800 |
| HST 332 <br> (p. 188) | Modern China\&Japan |
| HST 333 <br> (p. 188) | Hst of Mode Mdle East |
| HST 337 <br> (p. 188) | Hst Afr-19th Cn-Pr |
| HST 354 | Hst-Women Mid East |
| (p. 188) |  |
| HST 356 | Women in Third World |
| (p. 188) |  |


| HST 357 | Latin Amer-20th Cen |
| :--- | :--- |
| (p. 188) |  |
| HST 382 | History of Mexico |
| (p. 188) |  |
| HST 383 <br> (p. 188) | Hst of Caribbean |
| HST 386 <br> (p. 188) | China in Revolution |
| POL 321 | Russia\&New States |
| (p. 188) |  |

Concentration: Global Environmental Sustainability

| $\begin{aligned} & \text { ASI } 320 \\ & \text { (p. 188) } \end{aligned}$ | Cities and Energy | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { ECO } 435 \\ & \text { (p. 188) } \end{aligned}$ | Eco of Environmnt | 3 |
| ENG 342 <br> (p. 188) | Literature and the Environment | 3 |
| $\begin{aligned} & \text { HST } 342 \\ & \text { (p. 188) } \end{aligned}$ | Environ Hst Americas | 3 |
| $\begin{aligned} & \text { POL } 371 \\ & \text { (p. 188) } \end{aligned}$ | Environmental Policy | 3 |
| Select one | from: | 3 |


| BIO $359^{\text {(p. 188) }}$ | Sustainable Biosphre $^{7}$ |
| :--- | :--- |
| BIO 360 Island Environ Bio <br>   <br> (p. 188)  |  |
| BIO 395  <br> (p. Global Envr Biology  |  |

Select one course from: 3
PHL 331 Sci, Objtvty \& Values
(p. 188)

REL 365 Chr Ethics\&Environ
(p. 188)

REL 472 Ecology \& Religion
(p. 188)

Select one course from: 3

| ANT 356 <br> (p. 188) | Cultures of Africa |
| :--- | :--- |
| HST 326 <br> (p. 188) | Hst-Sov Un 1860-Pr |
| HST 330 <br> (p. 188) | Hst E Asia to 1800 |
| HST 332 <br> (p. 188) | Modern China\&Japan |
| HST 333 <br> (p. 188) | Hst of Mode Mdle East |
| HST 337 <br> (p. 188) | Hst Afr-19th Cn-Pr |
| HST 357 <br> (p. 188) | Latin Amer-20th Cen |
| HST 382 <br> (p. 188) | History of Mexico |
| HST 383 <br> (p. 188) | Hst of Caribbean |


| HST 386 <br> (p. 188) | China in Revolution |
| :--- | :--- |
| POL 320 | Western Europe |
| (p. 188) |  |
| POL 321 Russia\&New States <br> (p. 188)  <br> SOC 435 <br> (p. 188) Soc of Globalization |  |


| Concentration:International Business ${ }^{9}$ <br> INB 302 <br> (p. 188) | Survey of Intl Bus | 3 |
| :--- | :--- | :--- |
| INB 450 | Capstone Intrnl Bus |  |
| (p. 188) |  | 3 |
| Select three courses from: | 9 |  |


| ACC 207 | Intro-Financial Acc |
| :--- | :--- |
| (p. 188) |  |
| ECO 460 | Eco Develop \& Growth |
| (p. 188) |  |
| ECO 461 <br> (p. 188) |  |
| FIN 450 | International Econ Bus Finance |
| (p. 188) |  |
| MGT 403 | Cross-Cult Managemnt |
| (p. 188) |  |
| MKT 440 | Global Marketing |
| (p. 188) |  |

Select three courses from: 9

| ANT 356 <br> (p. 188) | Cultures of Africa |
| :--- | :--- |
| HST 315 | Europe 1945-Present |
| (p. 188) |  |
| HST 326 <br> (p. 188) | Hst-Sov Un 1860-Pr |
| HST 330 <br> (p. 188) | Hst E Asia to 1800 |
| HST 332 <br> (p. 188) | Modern China\&Japan |
| HST 333 <br> (p. 188) | Hst of Mode Mdle East |
| HST 334 | Hst Pal-Isrl Cflct |
| (p. 188) |  |
| HST 337 <br> (p. 188) | Hst Afr-19th Cn-Pr |
| HST 353 | Hst-Wom in Eurp Soc |
| (p. 188) |  |
| HST 354 <br> (p. 188) | Hst-Women Mid East |
| HST 356 Women in Third World <br> (p. 188)  <br> HST 357 Latin Amer-20th Cen <br> (p. 188)  <br> HST 382 <br> (p. 188) History of Mexico <br> HST 383 Hst of Caribbean <br> (p. 188)  |  |


| HST 386 | China in Revolution |
| :--- | :--- |
| (p. 188) |  |
| POL 320 | Western Europe |
| $\left.\begin{array}{ll}\text { (p. 188) } & \\ \text { POL 321 } & \text { Russia\&New States } \\ \begin{array}{ll}\text { (p. 188) } & \\ \text { SOC 435 } & \text { Soc of Globalization } \\ \text { (p. 188) } & \end{array}\end{array} \begin{array}{l}\end{array}\right)$. |  |


| Concentration: International Journalism ${ }^{10}$ |  |  |
| :---: | :---: | :---: |
| CMM 330 <br> (p. 188) | Media Writing | 3 |
| CMM 331 <br> (p. 188) | Feature Writing | 3 |
| CMM 350 <br> (p. 188) | Propaganda Analysis | 3 |
| CMM 355 <br> (p. 188) | Rhetoric-Soc Movements | 3 |
| CMS 414 <br> (p. 188) | Global Communication | 3 |
| $\begin{aligned} & \text { SOC } 343 \\ & \text { (p. 188) } \end{aligned}$ | Mass Comm-Mdrn Socty | 3 |
| Select one | from: | 3 |


| ANT 356 | Cultures of Africa |
| :--- | :--- |
| (p. 188) |  |
| HST 326 | Hst-Sov Un 1860-Pr |
| (p. 188) |  |

HST 330 Hst E Asia to 1800
(p. 188)

HST 332 Modern China\&Japan
(p. 188)

HST 333 Hst of Mode Mdle East
(p. 188)

HST 334 Hst Pal-Isrl Cflct
(p. 188)

HST 337 Hst Afr-19th Cn-Pr
(p. 188)

HST 353 Hst-Wom in Eurp Soc
(p. 188)

HST 354 Hst-Women Mid East
(p. 188)

HST 356 Women in Third World
(p. 188)

HST 357 Latin Amer-20th Cen
(p. 188)

HST 382 History of Mexico
(p. 188)

HST 383 Hst of Caribbean
(p. 188)

HST 386 China in Revolution
(p. 188)

POL 320 Western Europe
(p. 188)

POL 321 Russia\&New States
(p. 188)

| SOC 435 | Soc of Globalization |
| :--- | :--- |
| (p. 188) |  |
| Select one course from: |  |
| PHL 355 | Asian Philosophy |
| (p. 188) |  |
| PHL 363 | African Philosophy |
| (p. 188) |  |
| PHL 365 | Islamic Phl\& Culture |
| (p. 188) |  |
| REL 304 | Hinduism |
| (p. 188) |  |
| REL 305 | Eastern Orthodoxy |
| (p. 188) |  |
| REL 306 | Buddhism |
| (p. 188) |  |
| REL 307 | Judaism |
| (p. 188) |  |
| REL 308 | Islam |
| (p. 188) |  |

## Concentration: Migration

| ANT/SOC 368 (p. 188) | Immigration | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { HST } 378 \\ & \text { (p. 188) } \end{aligned}$ | Hst Globl Immgnts-US | 3 |
| $\begin{aligned} & \text { POL } 333 \\ & \text { (p. 188) } \end{aligned}$ | Pol of Human Rghts | 3 |
| $\begin{aligned} & \text { SOC } 328 \\ & \text { (p. 188) } \end{aligned}$ | Racial\&Eth Minorties | 3 |
| Select one course from: |  |  |
| $\begin{aligned} & \text { POL } 334 \\ & \text { (p. 188) } \end{aligned}$ | Pol-Human Rights II |  |
| $\begin{aligned} & \text { SOC } 371 \\ & \text { (p. 188) } \end{aligned}$ | Soc of Human Rights |  |
| Select one course from: |  |  |
| $\begin{aligned} & \text { PHL } 355 \\ & \text { (p. 188) } \end{aligned}$ | Asian Philosophy |  |
| $\begin{aligned} & \text { PHL } 363 \\ & \text { (p. 188) } \end{aligned}$ | African Philosophy |  |
| $\begin{aligned} & \text { PHL } 365 \\ & \text { (p. 188) } \end{aligned}$ | Islamic PhI\& Culture |  |
| $\begin{aligned} & \text { REL } 304 \\ & \text { (p. 188) } \end{aligned}$ | Hinduism |  |
| $\begin{aligned} & \text { REL } 305 \\ & \text { (p. 188) } \end{aligned}$ | Eastern Orthodoxy |  |
| $\begin{aligned} & \text { REL } 306 \\ & \text { (p. 188) } \end{aligned}$ | Buddhism |  |
| $\begin{aligned} & \text { REL } 307 \\ & \text { (p. 188) } \end{aligned}$ | Judaism |  |
| $\begin{aligned} & \text { REL } 308 \\ & \text { (p. 188) } \end{aligned}$ | Islam |  |
| Select two courses from: |  |  |
| ANT 356 <br> (p. 188) | Cultures of Africa |  |
| HST 326 <br> (p. 188) | Hst-Sov Un 1860-Pr |  |

HST $327 \quad$ Natnl Cult-Sov Union
(p. 188)

HST 330 Hst E Asia to 1800
(p. 188)

HST 332 Modern China\&Japan
(p. 188)

HST 333 Hst of Mode Mdle East
(p. 188)

HST 334 Hst Pal-Isrl Cflct
(p. 188)

HST 337 Hst Afr-19th Cn-Pr
(p. 188)

HST 353 Hst-Wom in Eurp Soc
(p. 188)

HST 354 Hst-Women Mid East
(p. 188)

HST 356 Women in Third World
(p. 188)

HST 357 Latin Amer-20th Cen
(p. 188)

HST 382 History of Mexico
(p. 188)

HST 383 Hst of Caribbean
(p. 188)

POL 320 Western Europe
(p. 188)

POL 321 Russia\&New States
(p. 188)

POL 331 Ntlsm \& Ethno Poltcs
(p. 188)

Concentration: Peace and Global Security

| $\text { POL } 335$ (p. 188) | US Natnl Sec Policy | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { POL } 406 \\ & \text { (p. 188) } \end{aligned}$ | Internatnl Law\&Organ | 3 |
| $\begin{aligned} & \text { POL } 452 \\ & \text { (p. 188) } \end{aligned}$ | Political Violence | 3 |
| $\begin{aligned} & \text { SOC } 435 \\ & (\text { p. 188) } \end{aligned}$ | Soc of Globalization | 3 |
| Select one course from: |  | 3 |
| HST 349 <br> (p. 188) | Tech\&Culture-War |  |
| $\begin{aligned} & \text { HST } 373 \\ & \text { (p. 188) } \end{aligned}$ | American Mil Hst |  |
| HST 386 <br> (p. 188) | China in Revolution |  |
| Select one course from: |  | 3 |
| $\begin{aligned} & \text { PHL } 317 \\ & \text { (p. 188) } \end{aligned}$ | Ethics\&Modern War |  |
| $\begin{aligned} & \text { PHL } 327 \\ & \text { (p. 188) } \end{aligned}$ | Philosophy of Peace |  |
| Select one course from: |  | 3 |
| ANT 320 <br> (p. 188) | Anthro of Childhoods |  |


| ANT 356 <br> (p. 188) | Cultures of Africa |
| :---: | :---: |
| $\begin{aligned} & \text { HST } 324 \\ & \text { (p. 188) } \end{aligned}$ | Comp Nationalism |
| $\begin{aligned} & \text { HST } 326 \\ & \text { (p. 188) } \end{aligned}$ | Hst-Sov Un 1860-Pr |
| $\begin{aligned} & \text { HST } 327 \\ & \text { (p. 188) } \end{aligned}$ | Natnl Cult-Sov Union |
| $\begin{aligned} & \text { HST } 332 \\ & \text { (p. 188) } \end{aligned}$ | Modern China\&Japan |
| HST 333 <br> (p. 188) | Hst of Mode Mdle East |
| HST 334 <br> (p. 188) | Hst Pal-Isrl Cflct |
| HST 337 <br> (p. 188) | Hst Afr-19th Cn-Pr |
| HST 357 <br> (p. 188) | Latin Amer-20th Cen |
| $\begin{aligned} & \text { POL } 320 \\ & \text { (p. 188) } \end{aligned}$ | Western Europe |
| $\begin{aligned} & \text { POL } 321 \\ & \text { (p. 188) } \end{aligned}$ | Russia\&New States |
| $\begin{aligned} & \text { POL } 331 \\ & \text { (p. 188) } \end{aligned}$ | Ntlsm \& Ethno Poltcs |

Select one course from: 3

| PHL 355 <br> (p. 188) | Asian Philosophy |
| :--- | :--- |
| PHL 363 | African Philosophy |
| (p. 188) |  |
| PHL 365 | Islamic PhI\& Culture |
| (p. 188) |  |
| REL 304 | Hinduism |
| (p. 188) |  |
| REL 305 | Eastern Orthodoxy |
| (p. 188) |  |
| REL 306 Buddhism <br> (p. 188)  <br> REL 307 Judaism <br> (p. 188)  <br> REL 308 Islam <br> (p. 188)  |  |

## Breadth

| ASI 150 | Intr to the Univ Exp | 1 |
| :--- | ---: | ---: |
| (p. 188) | 124 |  |

1 Courses taken for the major may also count toward completion of the Common Academic Program and the Liberal Studies Curriculum.
2 May substitute CMM 412 (p. 188), HST 301 (p. 188), POL 207 (p. 188), SOC 208 (p. 188), or another approved research methods course.
3 Students unable to satisfy this requirement with a study abroad experience because of other commitments (e.g. ROTC members) must fulfill this requirement with an internationally oriented internship.

4 Students studying a language for which a literature, culture, or film course does not currently exist must fulfill this requirement by taking ENG 205 (p. 188), ENG 322 (p. 188), or ENG 345 (p. 188).
5 Must be at 300 level or above and exclusive of literature, film, or culture courses. There are currently no 300 level courses offered in Arabic or Mandarin Chinese. In these cases, students are required to complete the highest level course offered. Completion satisfies the L2 requirement.
6 This course can be taken for this requirement only if not taken to fulfill the foundation requirements.
7 This course counts for biology majors, but is accessible to nonmajors as well.
8 This course is taught in Costa Rica. It counts for biology majors, but is open to non-majors as well.
9 Students pursuing this concentration must take into account prerequisites or class standing restrictions. Given the prerequisites, students are advised to follow an informal specialization. For finance or economics, take ACC 200 (p. 188), FIN 301 (p. 188), ECO 460 (p. 188), ECO 461 (p. 188) and FIN 450 (p. 188). For marketing or human resources, MGT 301 (p. 188), MKT 300 (p. 188), MGT 403 (p. 188) and MKT 440 (p. 188).
10 Students may substitute CMM 315 (p. 188), CMM 439 (p. 188), CMM 449 (p. 188), or a CMM course delivered in conjunction with a CMM summer education abroad program for one of the CMM or CMS courses when the topic has an international focus.

## Minor in International Studies (ins)

## International Studies



## Courses

INS 250. Research Methods. 1 Hour
An introduction to the practice of locating aids and source materials needed to conduct research on international topics. Prerequisite(s): Permission of program director.

## INS 390. Model United Nations. 1 Hour

Examination of the work and procedures of the United Nations and its constituent bodies, study of various international issues and policies of member states, as well as of parliamentary diplomatic practices such as caucusing, resolution writing, and speech making in preparation for participation in Model United Nations simulations. Prerequisite(s): Permission of instructor.

## INS 395. International Experience. 1 Hour

Orientation for and evaluation of study abroad, internship, immersion, work, or service experience in a foreign country, organization involved in international activities, or a cross-cultural setting in the United States. Grading Option Two only.

## INS 399. Independent Study. 1-3 Hours

Independent reading and research on an interdisciplinary topic in international studies chosen by the student in consultation with one or more faculty members. May be repeated. Prerequisite(s): Permission of program director.

## INS 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## INS 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

INS 495. International Studies Internship. 1-6 Hours
Practical, supervised experience with an approved organization dealing with international affairs. Repeatable up to six hours. Prerequisite(s): Permission of program director.

INS 499. Senior Capstone Seminar. 3 Hours
Capstone seminar for International Studies seniors in which students integrate the academic and experiential components of their multidisciplinary degree program in a capstone research project of their own choosing. Prerequisite(s): INS 250; senior status; permission of program director.

## Marianist Social Transformation

The minor in Marianist social transformation offers an interdisciplinary approach to Catholic, Marianist, and Christian studies. The program allows the student to utilize the rich resources in service, teaching, and research at the University of Dayton in order to explore and investigate those topics and issues that lie at the heart of the University. Open to all, participants will benefit from the two-hundred year Marianist experiment in the professions and higher education. Through its courses and activities, the minor prepares distinctive graduates to carry out social transformation based upon an understanding of Catholic and Christian contributions to the arts, sciences, and the professions.

## Marianist Studies Committee

Donald L. Pair (Office of the Dean), Coordinator Cadegan (History), Ensalaco (Political Science), Fitz (Ferree Professor in Social Justice), Inglis (Philosophy), K. Johnson (Religious Studies), McGrath (Religious Studies), Portier (Spearin Chair), Trollinger (History), Zukowski (Institute for Pastoral Initiatives)

## Minor in Marianist Social Transformation (MST)

| Marianist Social Transformation |  |
| :--- | :--- |
| MST 210 Spkrs Cath Socl Trad <br> (p. 194)  |  |


| MST 310 <br> (p. 194) | Read Signs Time | 3 |
| :---: | :---: | :---: |
| or MST 311 (p. 194) | Read Signs Time |  |
| or MST 312 (p. 194) | Readng-Signs-Times |  |
| Select one course from: |  | 3 |
| $\begin{aligned} & \text { ASI } 358 \\ & \text { (p. 194) } \end{aligned}$ | Chrstny,Ctzshp\&Socty |  |
| $\begin{aligned} & \text { HST } 372 \\ & \text { (p. 194) } \end{aligned}$ | Hst-Rel in US |  |
| $\begin{aligned} & \text { PHL } 327 \\ & \text { (p. 194) } \end{aligned}$ | Philosophy of Peace |  |
| $\begin{aligned} & \text { PHL } 356 \\ & \text { (p. 194) } \end{aligned}$ | Christian Philosophy |  |
| $\begin{aligned} & \text { REL } 363 \\ & \text { (p. 194) } \end{aligned}$ | Faith \& Justice |  |
| Select two courses from two different disciplines: |  | 6 |
| $\begin{aligned} & \text { ASI } 357 \\ & \text { (p. 194) } \end{aligned}$ | Vocation \& the Arts |  |
| $\begin{aligned} & \text { ASI } 371 \\ & \text { (p. 194) } \end{aligned}$ | Prf Eth Glgl Cm-Bus |  |
| $\begin{aligned} & \text { ASI } 372 \\ & \text { (p. 194) } \end{aligned}$ | Prf Eth Glgl Cm-Edu |  |
| $\begin{aligned} & \text { ASI } 373 \\ & \text { (p. 194) } \end{aligned}$ | Prf Eth Glgi Cm-Egr |  |
| $\begin{aligned} & \text { ASI } 374 \\ & \text { (p. 194) } \end{aligned}$ | Prf Eth Glgl Cm-Phl |  |
| $\begin{aligned} & \text { ASI } 375 \\ & \text { (p. 194) } \end{aligned}$ | Prf Eth Glgl Cm-Rel |  |
| $\begin{aligned} & \text { EGR } 330 \\ & \text { (p. 194) } \end{aligned}$ | Engr Dsgn \& Appr Techq |  |
| $\begin{aligned} & \text { ENG } 323 \\ & (\text { p. 194) } \end{aligned}$ | Lit-Christn Tradtn |  |
| $\begin{aligned} & \text { ENG } 384 \\ & \text { (p. 194) } \end{aligned}$ | Chrstnty\&Mod Poetry |  |
| $\begin{aligned} & \text { HST } 305 \\ & \text { (p. 194) } \end{aligned}$ | Medieval Europe |  |
| $\begin{aligned} & \text { HST } 307 \\ & \text { (p. 194) } \end{aligned}$ | Renaissance\&Reformtn |  |
| $\begin{aligned} & \text { HST } 311 \\ & (\text { p. 194) } \end{aligned}$ | Old Regime Europe |  |
| $\begin{aligned} & \text { HST } 313 \\ & \text { (p. 194) } \end{aligned}$ | Europe 1815-1914 |  |
| $\begin{aligned} & \text { HST } 358 \\ & \text { (p. 194) } \end{aligned}$ | Soc\&Cult Hst-Lat Am |  |
| $\begin{aligned} & \text { MUS } 301 \\ & \text { (p. 194) } \end{aligned}$ | Mus Hist \& Lit I |  |
| MUS 305 <br> (p. 194) | Africn Amer Sac Mus |  |
| MUS 350 <br> (p. 194) | Sacred Music Hst |  |
| MUS 452 <br> (p. 194) | Contemp Litgcl Mus Rep |  |
| $\begin{aligned} & \text { PHL } 307 \\ & \text { (p. 194) } \end{aligned}$ | Philosophy and Women |  |


| $\begin{aligned} & \text { PHL } 311 \\ & \text { (p. 194) } \end{aligned}$ | Phl of Religion |
| :---: | :---: |
| $\begin{aligned} & \text { PHL } 312 \\ & \text { (p. 194) } \end{aligned}$ | Ethics |
| $\begin{aligned} & \text { PHL } 313 \\ & \text { (p. 194) } \end{aligned}$ | Business Ethics |
| $\begin{aligned} & \text { PHL } 315 \\ & \text { (p. 194) } \end{aligned}$ | Medical Ethics |
| $\begin{aligned} & \text { PHL } 316 \\ & \text { (p. 194) } \end{aligned}$ | Engineering Ethics |
| $\begin{aligned} & \text { PHL } 319 \\ & \text { (p. 194) } \end{aligned}$ | Information Ethics |
| $\begin{aligned} & \text { PHL } 351 \\ & \text { (p. 194) } \end{aligned}$ | Medieval Philosophy |
| $\begin{aligned} & \text { PHL } 360 \\ & \text { (p. 194) } \end{aligned}$ | Existentialism |
| $\begin{aligned} & \text { POL } 333 \\ & \text { (p. 194) } \end{aligned}$ | Pol of Human Rghts |
| $\begin{aligned} & \text { POL } 426 \\ & (\text { p. 194) } \end{aligned}$ | Ldrshp-Communities |
| $\begin{aligned} & \text { PSY } 451 \\ & \text { (p. 194) } \end{aligned}$ | PSY of Religion |
| $\begin{aligned} & \text { REL } 323 \\ & (\text { p. 194) } \end{aligned}$ | Hst-Christianty I |
| $\begin{aligned} & \text { REL } 324 \\ & \text { (p. 194) } \end{aligned}$ | Hst-Christianty II |
| $\begin{aligned} & \text { REL } 358 \\ & (\text { p. 194) } \end{aligned}$ | Liberation Theology |
| $\begin{aligned} & \text { REL } 367 \\ & \text { (p. 194) } \end{aligned}$ | Chr Ethics\&HIth Care |
| $\begin{aligned} & \text { REL } 368 \\ & \text { (p. 194) } \end{aligned}$ | Practical wisdom in the business world |
| $\begin{aligned} & \text { REL } 369 \\ & (\text { p. 194) } \end{aligned}$ | Chrstn Ethics \& Engr |
| $\begin{aligned} & \text { REL } 471 \\ & \text { (p. 194) } \end{aligned}$ | Women and Religion |
| $\begin{aligned} & \text { REL } 474 \\ & \text { (p. 194) } \end{aligned}$ | Women-Global Church |
| $\begin{aligned} & \text { SOC } 334 \\ & \text { (p. 194) } \end{aligned}$ | Religion \& Society |
| $\begin{aligned} & \text { SOC } 339 \\ & \text { (p. 194) } \end{aligned}$ | Social Inequality |
| $\begin{aligned} & \text { SOC } 426 \\ & \text { (p. 194) } \end{aligned}$ | Ldrshp-Communities |
| VAH 450 <br> (p. 194) | Itl Renaissance Art |
| VAH 460 <br> (p. 194) | Baroque Art |
| Total Hours |  |

## Courses

## MST 210. Speakers on Catholic Social Tradition. 1 Hour

Introduction to contemporary Marianist, Catholic, and Christian social issues as reflected in presentations made on campus by significant outside speakers. Study and discussion of texts in order to meet and evaluate speakers.

MST 310. Reading the Signs of the Times. 3 Hours
An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the Historical Study domain will be emphasized. This course is cross-listed with MST 311 and MST 312 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

## MST 311. Reading the Signs of the Times. 3 Hours

An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the domain of Philosophy will be emphasized. This course is cross-listed with MST 310 and MST 312 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

## MST 312. Reading the Signs of the Times. 3 Hours

An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the domain of Religious Studies will be emphasized. This course is cross-listed with MST 310 and MST 311 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

## Mathematics

## Majors:

- Bachelor of Arts, Mathematics (p. 196)
- Bachelor of Science, Applied Mathematical Economics (p. 197)
- Bachelor of Science, Mathematics (p. 198)

Minors:

- Actuarial Science (p. 199)
- Mathematics (p. 199)

The B.A. program in mathematics provides for a breadth of mathematical study within the context of a liberal arts degree. It may be chosen as a preparation for a professional career in business, education, law or social science. It affords the student a significant distribution of courses in the humanities and social sciences so that he or she can develop a concentration in a field other than mathematics. The student's career goals will generally suggest desirable upper level mathematics electives. For example, prospective secondary mathematics teachers should participate in the licensure program and elect courses such as MTH 370, MTH 395, and MTH 466. Students with an interest in business, law, or social science should complete the probability and statistics sequence MTH 411-MTH 412.

The B.S. program in mathematics provides a foundation for students who wish to pursue graduate studies in any area of the mathematical sciences, to enter the actuarial profession, or to enter careers where mathematics is used in an engineering or science setting. A preparation for graduate programs in a mathematical science should include electives such as MTH 342, MTH 404and MTH 471. Those planning on pursuing an actuarial career should take the actuarial science minor described below. To prepare for using mathematics in an applied context, some useful elective courses are MTH 403, MTH 404, and the MTH 411-MTH 412 sequence. All students pursuing a bachelor of science in mathematics are required to complete a minor in another subject.

The B.S. program in applied mathematical economics provides a foundation in economics, mathematics and statistics needed for graduate
study in economics or applied statistics, or for research and technical careers in business or government service. This degree is offered jointly by the Department of Mathematics and the Department of Economics and Finance in the School of Business Administration.

The basic courses are offered every term:

| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| :--- | :--- | :--- |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 219 | Applied Differential Equations | 3 |
| MTH 308 | Foundations \& Discrete Mathematics | 3 |
| MTH 310 | Linear Algebra \& Matrices | 3 |

Most majors will take MTH 218 and MTH 308 in the same term.
The required core courses are offered at least once a year:

| MTH 330 | Intermediate Analysis | 3 |
| :--- | :--- | :--- |
| MTH 361 | Introduction to Abstract Algebra | 3 |
| MTH 411 | Probability \& Statistics I | 3 |
| MTH 430 | Real Analysis | 3 |

However, most of the other upper-level electives for the major are offered only once every two years; thus careful planning for a student's upper-level electives should be done in consultation with the advisor. In addition, the symbolic logic course, PHL 302, is a recommended general education course for all mathematics majors.

A minor in mathematics consists of twelve semester hours (300-400 level).

A minor in actuarial science is offered through the Department of Mathematics. This consists of courses in calculus, statistics, theory of interest, economics, and finance, and is designed to prepare the student to take the actuarial examinations in probability and financial mathematics.

## Faculty

Joe D. Mashburn, Chairperson
Distinguished Service Professor: Peterson
Professors Emeriti: Back, Friel, Gantner, Kauflin, McCloskey, Mushenheim, Rice, Schleppi, Shaughnessy, R. Steinlage, Strange Professors: Abueida, Eloe, Higgins, Islam, Mashburn, Raffoul
Associate Professors: Busch, Diestelkamp, Driskell, Gorton, Hovey, Krakowski, Liu, Usman
Assistant Professors: Keen, Kublik, Qumsiyeh, Ren, Yengulalp Lecturers: Harrison, Ober, Saintignon, Simon, L. Steinlage

## Bachelor of Arts with a major in Mathematics (mth) Minimum 124 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World | 12 |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I $^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |  |


| ENG 200 | Writing Seminar II |  |
| :---: | :---: | :---: |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variable credit |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variable credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| Completed with ASI 110 and ASI 120. |  |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |  |
| 3 Completed with ENG 200H or ASI 120. |  |  |
| Liberal Studies Curriculum |  |  |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements |  | 36 |
| MTH 168 <br> (p. 195) | Anly Geom \& Calc I (Satisfies CAP Mathematics) | 4 |
| MTH 169 <br> (p. 195) | Anly Geom \& Calc II | 4 |
| MTH 218 (p. 195) | Anly Geom \& Calc III | 4 |
| MTH 308 <br> (p. 195) | Fndtn \& Discrete Mth | 3 |
| $\begin{aligned} & \text { MTH } 310 \\ & \text { (p. 195) } \end{aligned}$ | Lin Alg \& Matrices | 3 |
| $\begin{aligned} & \text { MTH } 330 \\ & \text { (p. 195) } \end{aligned}$ | Intermed Analysis | 3 |
| MTH 361 <br> (p. 195) | Intro-Abstrct Algbra | 3 |
| MTH 411 <br> (p. 195) | Probablty \& Stat I | 3 |
| MTH 480 <br> (p. 195) | Math Capstone (Satisfies CAP Major Capstone) | 3 |
| Select two MTH c | courses (300/400 level) | 6 |


| Breadth |  |
| :--- | ---: |
| ASI 150 | Intr to the Univ Exp |
| (p. 195) | 1 |
| Total Hours to total at least | 124 |

## Bachelor of Science with a major in Applied Mathematical Economics (mte) Minimum 120 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3

ENG $200 \quad$ Writing Seminar II
Oral Communication 3

| CMM $100 \quad$ Principles of Oral Communication | 3 |
| ---: | ---: |

Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable |
| :--- | :--- |
| credit |  |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120 .
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.

3 Completed with ENG 200 H or ASI 120.

## Science Breadth Requirements

Satisfies CAP Natural Science
CPS 150 Algorthm\&Progrm I 4
(p. 195)

CPS 151 Algorthm\&Progrm II 4
(p. 195)

Select one natural sciences group from:

BIO 151 Concepts of Bio I
(p. 195) and Concepts-Bio Lab I
\& 151L and Concepts of Bio II
(p. 195) and Concepts-Bio Lab II
\& BIO 152
(p. 195)
\& BIO 152L
(p. 195)

CHM 123
(p. 195)
\& 123L
(p. 195)
\& CHM 124
(p. 195)
\& CHM 124L
(p. 195)

GEO 115
(p. 195)
\& 115L
(p. 195)
\& GEO 116
(p. 195)
\& GEO 116L
(p. 195)

PHY 206
(p. 195)
\& PHY 207
(p. 195)
\& PHY 210L
(p. 195)
\& PHY 211L
(p. 195)

General Chemistry
and Gen Chemistry Lab
and General Chemistry
and Gen Chemistry Lab

Major Requirements
Mathematics
MTH $168 \quad$ Anly Geom \& Calc I (Satisfies CAP Mathematics) 4
MTH 169 Anly Geom \& Calc II 4
(p. 195)

MTH $218 \quad$ Anly Geom \& Calc III 4
(p. 195)

MTH 308 Fndtn \& Discrete Mth 3
(p. 195)

MTH $310 \quad$ Lin Alg \& Matrices 3
(p. 195)

MTH $330 \quad$ Intermed Analysis 3
(p. 195)

MTH $411 \quad$ Probablty \& Stat I 3
(p. 195)

MTH $412 \quad$ Probablty \& Stat II 3
(p. 195)

MTH $480 \quad$ Math Capstone (Satisfies CAP Major Capstone) 3
(p. 195)

Economics
ECO 203 Prin of Microecon (Satisfies CAP Crossing 3
(p. 195) Boundaries: Inquiry)

ECO $204 \quad$ Prin of Macroecon (Satisfies CAP Crossing 3
(p. 195) Boundaries: Inquiry)

| ECO 346 | Intrmd MicroEco Anly | 3 |
| :--- | :--- | :---: |
| (p. 195) |  | 3 |
| ECO 347 | Intrmd MacroEco Anly |  |
| (p. 195) |  | 3 |
| ECO 441 <br> (p. 195) | Econometrics | 3 |
| Select one ECO course (300/400 level) |  |  |

## Breadth

| ASI 150 $\quad$ Intr to the Univ Exp | 1 |
| :--- | :--- | ---: |
| (p. 195) |  |
| Social and Behavioral Sciences (Includes CAP Social Science) | 6 |
| Total Hours to total at least | 120 |

## Bachelor of Science with a major in Mathematics (mth) Minimum 120 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected

| First-Year Humanities Commons ${ }^{1}$ |
| :--- | :--- |
| HST 103 The West \& the World <br> REL 103 Introduction to Religioius \& Theological Studies <br> PHL 103 Introduction to Philosophy <br> ENG 100 Writing Seminar I $^{2}$ | |  |
| :--- |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$

ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics
Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variab |
| :--- | :--- |
| credit |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variab |
| :--- | :--- |
| credit |  |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## Science Breadth Requirements

Computer Science (CPS 150 applies to CAP Natural Sciences) 3-4

$$
\text { CPS } 132 \text { Progrmmng-Engr \& Sci }
$$

(p. 195)
or CPS 150 Algorthm\&Progrm I
(p. 195)

Select one natural sciences group from: (Applies to CAP Natural 8 Science)

BIO 151 Concepts of Bio I
(p. 195) and Concepts-Bio Lab I
\& 151L and Concepts of Bio II
(p. 195) and Concepts-Bio Lab II
\& BIO 152
(p. 195)
\& BIO 152L
(p. 195)

CHM 123 General Chemistry
(p. 195) and Gen Chemistry Lab
\& 123L and General Chemistry
(p. 195) and Gen Chemistry Lab
\& CHM 124
(p. 195)
\& CHM 124L
(p. 195)

GEO 115
(p. 195)
\& 115L
(p. 195)

Physical Geology
and Physical Geology Lab
(p.
and Geolgcl Hst-Earth
and Geolgcl Hst-Earth Lb
\& GEO 116
(p. 195)
\& GEO 116L
(p. 195)

PHY 206 Gen Physics I Mech
(p. 195)
\& PHY 207
(p. 195)
\& PHY 210 L
(p. 195)
\& PHY 211L
(p. 195)
and Gen Phy II Ele \& Mag and Gen Physics Lab I and Gen Physics Lab II
e Select two courses acceptable for science majors 6
Major Requirements 45
MTH 168 Anly Geom \& Calc I (Satisfies CAP Mathematics) 4
(p. 195)

MTH 169 Anly Geom \& Calc II 4
(p. 195)

MTH $218 \quad$ Anly Geom \& Calc III 4
(p. 195)

MTH 219 Appl Diff Equations 3
(p. 195)

MTH $308 \quad$ Fndtn \& Discrete Mth 3
(p. 195)
MTH $310 \quad$ Lin Alg \& Matrices 3
(p. 195)

MTH 330 Intermed Analysis 3
(p. 195)

MTH 361 Intro-Abstrct Algbra 3
(p. 195)

MTH 430 Real Analysis 3

| MTH 480 (p. 195) | 3 |
| :---: | :---: |
| Select four MTH courses (300/400 level) ${ }^{1}$ | 12 |
| Breadth |  |
| ASI 150 (p. 195) | 1 |
| Social and Behavioral Sciences (Includes CAP Social Science) | 6 |
| Total Hours to total at least | 120 |

1 Departmental approval required.

## Minor in Actuarial Science (acs)

The Minor in Actuarial Science is designed to prepare students to pass the $P$ and $F M$ actuarial tests. It is also designed to supply students with VEE (Validation by Educational Experience) credit in economics, corporate finance, and applied statistics.

The minor contains eight courses in mathematics for a total of twentytwo semester hours. One of these is a course in the theory of interest and one is a seminar which prepares students to take the $P$ test. Mathematics majors will take all but two of the mathematics requirements for the minor as part of their major requirements.

The minor also contains eight courses in accounting, economics, and finance for a total of twenty-four semester hours. Economics and finance majors will take all of these courses as part of their major requirements. They will be able to substitute two of the mathematics courses for those that they are required to take for their major.

A total of forty-six semester hours are required for the minor.

## Actuarial Science

| ACC 207 <br> (p. 195) | Intro-Financial Acc | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { ECO } 203 \\ & \text { (p. 195) } \end{aligned}$ | Prin of Microecon ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { ECO } 204 \\ & (\text { p. 195) } \end{aligned}$ | Prin of Macroecon ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { ECO } 410 \\ & (\text { p. 195) } \end{aligned}$ | Bus\&Eco Forecasting ${ }^{2}$ | 3 |
| FIN 301 <br> (p. 195) | Intro to Financial Mgt ${ }^{3}$ | 3 |
| $\begin{aligned} & \text { FIN } 360 \\ & \text { (p. 195) } \end{aligned}$ | Investments | 3 |
| $\begin{aligned} & \text { FIN } 470 \\ & \text { (p. 195) } \end{aligned}$ | Fixed Inc Sec | 3 |
| $\begin{aligned} & \text { FIN } 480 \\ & \text { (p. 195) } \end{aligned}$ | Optns\&Futures Mkts | 3 |
| MTH 168 <br> (p. 195) | Anly Geom \& Calc I | 4 |
| MTH 169 <br> (p. 195) | Anly Geom \& Calc II | 4 |
| MTH 218 <br> (p. 195) | Anly Geom \& Calc III | 4 |
| MTH 229 <br> (р. 195) | Theory of Interest | 3 |
| MTH 328 <br> (p. 195) | Actuarial Prob Sem | 1 |

$\left.\begin{array}{llr}\begin{array}{l}\text { MTH 411 } \\ \text { (p. 195) }\end{array} & \text { Probablty \& Stat I } & 3 \\ \begin{array}{l}\text { MTH 412 } \\ \text { (p. 195) }\end{array} & \text { Probablty \& Stat II } & 3 \\ \hline \text { Total Hours } & 46 \\ 1 & \text { ECO } 203 \text { (p. 195) and ECO } 204 \text { (p. 195) together qualify for VEE }\end{array}\right]$

## Minor in Mathematics (mth)

| Mathematics |  |
| :--- | :--- |
| Select four MTH courses (300/400 level) | 12 |
| Total Hours | 12 |

## Courses

## MTH 102. Fundamentals of Math. 3 Hours

Sets, functions and graphs, exponents, polynomials and algebraic equations, systems of equations. Prerequisite(s): One year of high school algebra.

## MTH 114. Contemporary Math. 3 Hours

Study of contemporary mathematical topics and their applications. Topics may include management science, statistics, social choice, size and shape, and computer mathematics. Prerequisite(s): Two years of high school algebra.

## MTH 116. Precalculus Math. 4 Hours

Review of topics from algebra and trigonometry including polynomials, functions and graphs, exponential and logarithmic functions, trigonometric functions and identities. Prerequisite(s): Two years of high school algebra.

## MTH 128. Finite Mathematics. 3 Hours

Topics from mathematics used in business including systems of equations, inequalities, matrix algebra, linear programming and logarithms; applications to compound interest, annuities and other finance problems. Prerequisite(s): MTH 102 or sufficient college preparatory mathematics.

## MTH 129. Calculus for Business. 3 Hours

Topics from differential and integral calculus used in business; applications to optimizing financial functions, marginal functions in economics, and consumer or producer surplus. Prerequisite(s): MTH 128 or sufficient college preparatory mathematics.

## MTH 137. Calculus I with Review. 4 Hours

Introduction to the differential and integral calculus with an extensive review of algebra and trigonometry; differentiation and integration of algebraic and transcendental functions with applications. Prerequisite(s): Two years of high school algebra.

MTH 138. Calculus I with Review. 4 Hours
Introduction to the differential and integral calculus with an extensive review of algebra and trigonometry; differentiation and integration of algebraic and transcendental functions with applications. Prerequisite(s): MTH 137.

## MTH 148. Introductory Calculus I. 3 Hours

Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to the life and social sciences. Prerequisite(s): MTH 116 or equivalent.

## MTH 149. Introductory Calculus II. 3 Hours

Continuation of MTH 148. Multivariable calculus, matrices, difference equations, probability, discrete and continuous random variables, and differential equations with applications to the life and social sciences. Prerequisite(s): MTH 138 or MTH 148.

## MTH 168. Analytic Geometry \& Calculus I. 4 Hours

Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to science and engineering. Prerequisite(s): MTH 116 or equivalent.

## MTH 169. Analytic Geometry \& Calculus II. 4 Hours

Continuation of MTH 168. Conic sections, techniques of integration with applications to science and engineering, infinite series, indeterminate forms, Taylor's theorem. Prerequisite(s): MTH 138 or MTH 168.

## MTH 204. Mathematical Concepts I. 3 Hours

First course of a two-semester sequence designed for pre-service teachers. Concepts necessary for an understanding of the structure of arithmetic and its algorithms, number patterns, sets, problem solving, percent, relation and proportion, use of calculators. Prerequisite(s): One year of high school algebra; one year of high school geometry.

## MTH 205. Mathematical Concepts II. 3 Hours

Continuation of MTH 204. Topics include probability, representing and interpreting data, the metric system, elementary geometry, geometric patterns, coordinate geometry, algebra and geometry, transformations, computer literacy. Prerequisite(s): MTH 204.

## MTH 207. Introduction to Statistics. 3 Hours

Introduction to the concepts of statistical thinking for students whose majors do not require calculus. Methods of presenting data, including graphical methods. Using data to make decisions and draw conclusions. Basic ideas of drawing a sample and interpreting the information that it contains. Prerequisite(s): Two years of high school algebra.

## MTH 214. Mathematical Concepts for Middle School Teachers. 3 Hours

Concepts necessary for an understanding of the arithmetic taught in both elementary and middle grades. Includes a study of the structure of arithmetic and its algorithms; problem solving; reasoning and proof; proportional reasoning; use of computers and calculators to solve problems. Prerequisite(s): Two years of high school algebra.

## MTH 215. Algebra, Functions \& Graphs. 3 Hours

Development of the algebra of various families of functions including polynomial, exponential, logarithmic, and trigonometric functions; factoring and roots; interpretation of graphs; use of calculators and data collection devices to solve problems. Prerequisite(s): MTH 214.

## MTH 216. Calculus Concepts \& Applications. 3 Hours

Develop conceptual understanding of basic calculus concepts; introduction to the notion of limit; rates of change; slopes and area computations; use of calculators and data collection devices to make predictions, estimations, and solve problems. Prerequisite(s): MTH 215.

## MTH 218. Analytic Geometry \& Calculus III. 4 Hours

Continuation of MTH 169. Solid analytic geometry, vectors and vector functions, multivariable calculus, partial derivatives, multiple integrals. Prerequisite(s): MTH 169.

## MTH 219. Applied Differential Equations. 3 Hours

First order equations, linear equations with constant coefficients, systems of equations, the Laplace transform, numerical methods, applications. Prerequisite(s): MTH 218.

## MTH 229. Theory of Interest. 3 Hours

Rigorous, calculus-based treatment of the Theory of Interest. Topics covered include interest, compounding, discounting, annuities, sinking funds, amortization, bonds, yield rates, and applications of these ideas and processes to problems in finance. Prerequisite(s): MTH 169.

## MTH 250. Advanced Technical Mathematics. 3 Hours

Appropriate analytical techniques for students of engineering technology; topics include integration by parts, multivariable calculus, complex numbers, matrices and system of linear equations, and first and second order differential equations. Applications are appropriate for the engineering technology programs (circuits, vibrations, and heat transfer). Prerequisite(s): MTH 138 or MTH 168.

## MTH 266. Discrete \& Finite Mathematics for Middle School Teachers. 3 Hours

Topics in finite and discrete mathematics; linear programming; applications in finance; graph theory; mathematics of social choice; logic; use of computers and calculators to model and solve problems. Prerequisite(s): MTH 214.

## MTH 270. Geometry Concepts \& Applications. 3 Hours

Introduction to the geometry of two- and three-dimensional space; patterns in geometry; measurement systems; transformations and similarity; coordinate geometry; the algebra of geometry; trigonometry; use of dynamic computer software to explore geometric concepts. Prerequisite(s): MTH 214.

## MTH 290. Topics in Mathematics. 1-3 Hours

Exploration of varying topics appropriate for the needs of the pre-service training of teachers of mathematics. May be repeated as topics change. Prerequisite(s): One mathematics course beyond MTH 102; permission of department chairperson and/or instructor.

MTH 295. Historical Roots of Elementary Mathematics. 3 Hours Fundamental historical development of modern arithmetic, algebra, geometry, and number systems from early Egyptian, Babylonian, and Greek sources. Students may not receive credit for both this course and MTH 395. Prerequisite(s): MTH 214.

## MTH 308. Foundations \& Discrete Mathematics. 3 Hours

An introduction to proof using topics in foundational and discrete mathematics; propositional logic; number theory; sequences and recursion; set theory; relations; combinatorics; linear programming. Prerequisite(s): MTH 169.

## MTH 310. Linear Algebra \& Matrices. 3 Hours

Fundamental concepts of vector spaces, determinants, linear transformations, matrices, inner product spaces, and eigen-vectors. Offered each term. Prerequisite(s): MTH 218, MTH 308. (May be taken as corequisites).

## MTH 328. Actuarial Probability Seminar. 1 Hour

Problem solving seminar to develop and improve skills in applied probability. This seminar will focus on actuarial applications of probability theory. Prerequisite(s): MTH 411.

## MTH 329. Actuarial Finance Seminar. 1 Hour

Problem solving seminar to develop and improve skills in applied mathematical finance. This seminar will focus on integrating the mathematical presentation of the Theory of Interest to the field of finance. Prerequisite(s): FIN 470; MTH 229.

## MTH 330. Intermediate Analysis. 3 Hours

Theoretical development of the calculus of a real-valued function of a real variable. Topics include the algebraic and topological properties of the real line, limits of sequences and functions, continuity, differentiability, and integration. Prerequisite(s): MTH 310.

## MTH 342. Set Theory. 3 Hours

Elementary set theory including relations, functions, indexed families, denumerable and nondenumerable sets, cardinal and ordinal arithmetic, Zorn's Lemma, the well-ordering principle and transfinite induction. Prerequisite(s): MTH 218, MTH 308.
MTH 343. Mathematics for Electrical \& Computer Engineers. 3 Hours Linear algebra and matrices, complex variables, mathematical transforms and their inter-relations. Focus on mathematical theories as well as applications and an extensive use of MATLAB. Prerequisite(s): MTH 219.

## MTH 361. Introduction to Abstract Algebra. 3 Hours

Fundamental concepts of groups, rings, integral domains and fields. Prerequisite(s): MTH 218, MTH 308.

## MTH 367. Statistical Methods I. 3 Hours

Probability distributions including binomial, hypergeometric, Poisson, and normal. Estimation of population mean and standard deviation: Confidence intervals and tests of hypotheses using t -, Chi-square, and F-statistics. Mathematics majors enroll in MTH 411 instead of MTH 367. Prerequisite(s): MTH 149 or MTH 169.

## MTH 368. Statistical Methods II. 3 Hours

Distribution-free methods including rank tests, sign tests, and Kolmogorov-Smirnov test. Method of least squares, correlation, linear regression, analysis of variance. Design of experiments and computer applications. Mathematics majors enroll in MTH 412 instead of 368. Prerequisite(s): MTH 367.

## MTH 370. Introduction to Higher Geometry. 3 Hours

Projective, affine, and hyperbolic geometries using synthetic and/or analytic techniques. Prerequisite(s): MTH 218, MTH 308.
MTH 376. Number Theory. 3 Hours
Topics include Diophantine equations, Chinese Remainder theorem, Mobius inversion formula, quadratic residues and the Law of Quadratic Reciprocity, Gaussian integers, and integral quaternions. Prerequisite(s): MTH 218, MTH 308.

## MTH 395. Development of Mathematical Ideas. 3 Hours

The evolution of mathematical ideas and techniques from ancient times to the present with emphasis on the Greek era. Famous people and famous problems. Chronological outline of mathematics in each of its branches along with applications. Prerequisite(s): MTH 218, MTH 308.
MTH 403. Boundary Value Problems. 3 Hours
Introduction to the Sturm-Liouville problem. Fourier trigonometric series, Fourier integrals, Bessel functions, and Legendre polynomials. The heat equation, wave equation, and Laplace's equation with applications. Solutions by the product method. Prerequisite(s): MTH 219, MTH 310.

## MTH 404. Complex Variables. 3 Hours

Functions of a complex variable, conformal mapping, integration in the complex plane. Laurent series and residue theory. Prerequisite(s): MTH 219.

## MTH 411. Probability \& Statistics I. 3 Hours

Mathematical probability, random variables, Bayes' Theorem, Chebyshev's Inequality, Binomial, Poisson, and Normal probability laws, moment generating functions, limit theorems, descriptive statistics, large sample statistical inference. MTH 308 is recommended as preparation for this course. Prerequisite(s): MTH 218.

## MTH 412. Probability \& Statistics II. 3 Hours

Multivariate distributions, transformations of random variables, sampling distribution theory, estimation of parameters including maximum likelihood, confidence intervals, the Neyman-Pearson lemma, tests of hypotheses, likelihood ratio tests. Prerequisite(s): MTH 411.

## MTH 430. Real Analysis. 3 Hours

Continuation of MTH 330. Topics include the theory of convergence of sequences and series of functions in the context of metric spaces, uniform continuity, uniform convergence, and integration. Prerequisite(s): MTH 330 .

## MTH 435. Advanced Multivariate Calculus. 3 Hours

Topics include directional derivatives, chain rule, Lagrange multipliers, Taylor's formula, the mean value theorem, inverse mapping theorem, implicit function theorem, integration, Fubini's theorem, change of variables, line integrals, Green's theorem and Stoke's theorem. Prerequisite(s): MTH 310.
MTH 440. Introduction to Mathematical Modeling. 3 Hours
Introduction to the use of mathematical techniques and results in constructing and modifying models designed to solve problems encountered in everyday life. Computer simulation and limitations thereof, dimensional analysis, scaling and approximations at various levels are discussed. Prerequisite(s): MTH 219, MTH 310.

## MTH 441. Mathematics Clinic. 1 Hour

Student teams will be responsible for the development and/or modification and testing of a mathematical model designed for a particular purpose. Faculty guidance. Prerequisite(s): MTH 440; permission of department chairperson.

## MTH 445. Special Topics in Mathematics. 1-3 Hours

Lectures in specialized areas such as abstract algebra, applied mathematics, complex variables, differential forms, functional analysis, Galois theory, game theory, general topology, normed linear spaces, probability theory, real variables, topological groups. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## MTH 458. Mathematical Models in Finance. 3 Hours

Mathematical models in finance which include discrete and continuous models for stock price, interest rate model, bond pricing model, and option pricing model. Quantitative methods are introduced and employed. The methods include Black-Scholes formula, Monte-Carlo simulation, and binomial tree. Markowitz's optimal portfolio selection method is introduced and employed. Prerequisite(s): MTH 310.

## MTH 465. Linear Algebra. 3 Hours

Vector spaces, linear transformations and matrices, determinants, inner product spaces, invariant direct-sum decomposition and the Jordan canonical form. Prerequisite(s): MTH 310.

## MTH 466. Graph Theory \& Combinatiorics. 3 Hours

Graphs as algebraic structures; Eulerian, Hamiltonian, complete, connected and planar graphs. Applications include scheduling and routing problems. Discussion of algorithms for optimal or nearoptimal solutions. Combinatorial topics could include generating functions, recurrence relations, Polya's theorem and Ramsey Theory. Prerequisite(s): MTH 308 or MTH 310.

## MTH 467. Combinatorial Design Theory. 3 Hours

Topic include discussion of Latin squares, mutually orthogonal Latin squares, orthogonal and perpendicular arrays, Steiner triple systems, block designs, difference sets, and finite geometries. Prerequisite(s): MTH 308.

## MTH 471. Topology. 3 Hours

Introduction to topological spaces and continuous functions including a study of separation and countability axioms and elementary properties of metric spaces, connected spaces, and compact spaces. Prerequisite(s): MTH 308.

## MTH 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## MTH 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## MTH 480. Math Capstone. 3 Hours

No description available.

## MTH 490. Readings in Mathematics. 1-3 Hours

Individual study in specialized areas carried out under the supervision of a staff member. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## Military Science ROTC

The Department of Military Science offers the Reserve Officers Training Corps (ROTC) program on the campus, providing instruction in general military subjects applicable to all branches of the Army. The purpose of the Reserve Officers Training Corps is to develop selected collegeeducated men and women for positions of responsibility as officers in the active Army, the Army Reserve, and the Army National Guard.

The military science program is designed to develop a high degree of personal honor, self-reliance, and leadership and to provide the means of becoming better informed on matters of national defense. The program provides men and women who are working toward a baccalaureate degree the opportunity to become officers in the United States Army.

The four-year program is divided into a basic course ${ }^{1}$ (normally first and second years) and an advanced course (normally third and fourth years), and it is offered to all students for academic credit.

The basic course emphasizes practical leadership techniques and management concepts that apply equally in both military organizations and private industry. While in this phase of the program, students, other than contracted ROTC scholarship students, have no military obligation and are simply taking ROTC courses, like any other college courses, for credit. Students who receive credit for the basic course and demonstrate a potential for becoming effective officers may continue to pursue a commission by enrolling in the advanced course.

The advanced course is designed to prepare students to be Army lieutenants by including practical work in tactics, training, management, leadership techniques, and the exercise of command. Advanced course students are paid $\$ 450$ (juniors) and $\$ 500$ (seniors) a month during the school year. During the summer between the junior and senior years, cadets enroll in a thirty-two day Leadership Development Assessment Course (LDAC), which allows them to apply the leadership and technical
training learned in the classroom. While at LDAC, students are paid half a second lieutenant's monthly salary or about $\$ 1100$.

In addition to ROTC instruction, a student must attain an equal level of professional military education. Army officers, like other professionals, cannot be satisfied with a collection of knowledge found only in their academic field. In order to be prepared to become officers, students are required to complete a course in military history.

The minor in military science provides students with the opportunity to study the theory and practice of the military profession. The minor consists of twelve semester hours of upper-level courses.

Students desiring to minor in military science should notify their respective deans and the Department of Military Science.

The ROTC program is also available to students with three or two years remaining on campus, including graduate students. Special programs, such as ROTC summer Leader's Training Course (LTC), have been established to allow second-semester sophomores and juniors or seniors who will be going on to graduate school to participate in the military science program.

There is also a special program whereby veterans and JROTC students can receive advanced placement credit in Army ROTC. Veterans and students with high school JROTC training, with the approval of the chairperson of the Department of Military Science, may receive placement credit for part or all of the basic course. Each case will be judged individually so that the best interests of both the student and the military may be served.

Army ROTC scholarships are available to students. These scholarships cover four, three, and two-year periods and provide for full tuition and charges, $\$ 1200$ a year for books, and a tax-free subsistence allowance of $\$ 300$ a month for first year cadets, \$350 a month for sophomore cadets, $\$ 450$ a month during the junior year and $\$ 500$ a month in the senior year for up to ten months. Scholarships, which are highly competitive, are awarded to those who demonstrate outstanding scholarly, athletic and leadership ability.
${ }^{1}$ At Sinclair Community College:
MIL 122, MIL 123
Complete UD requirements for:
MIL 101 Leadership I
MIL 102 Leadership II
MIL 222, MIL 223
Complete UD requirements for:
MIL 201 Map Reading \& Small Unit Tactics
MIL 202 Military Leadership

## Faculty

LTC Daniel Redden, U.S. Army, Chairperson
Professor: Redden
Assistant Professors: Germanceri, McGough
Instructors: Perez, Siler

## Minor in Military Science (mil)

| Military Science, ROTC |  |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { MIL } 301 \\ & \text { (p. 202) } \end{aligned}$ | Ldng Sm Orgnzations I | 3 |
| $\begin{aligned} & \text { MIL } 302 \\ & \text { (p. 202) } \end{aligned}$ | Ldng Sm Orgnztns II | 3 |
| $\begin{aligned} & \text { MIL } 401 \\ & \text { (p. 202) } \end{aligned}$ | Leadrshp Mgmnt\&Staff | 3 |
| $\begin{aligned} & \text { MIL } 402 \\ & \text { (p. 202) } \end{aligned}$ | Appld Ldrshp \& Mgmt | 3 |
| Total Hours |  | 12 |

## Courses

## MIL 101. Leadership I. 1 Hour

ROTC programs and opportunities; rappelling, leadership, communications and management skills, and rifle marksmanship. Optional field trips, field exercises, physical training, leadership laboratory and social events.

## MIL 102. Leadership II. 1 Hour

Rifle marksmanship, fundamentals and principles of leadership, management techniques for individual, group behavior and leadership dimensions. Optional physical training, leadership laboratory, and social events.

## MIL 201. Map Reading \& Small Unit Tactics. 2 Hours

Study of basic map reading skills, small unit tactics, movement techniques, weapons marksmanship orientation, and survival skills. Participation in leadership laboratory and two field training exercises. Optional physical training and social events.

## MIL 202. Military Leadership. 2 Hours

Interactive study of the fundamentals of military leadership, ethical decision-making, effective counseling techniques, and conflict resolution. Study of the role and branches of the US Army and the role of the commissioned, warrant, and noncommissioned officer. Optional participation in leadership laboratories, field training exercises, physical fitness training, and social events.

## MIL 301. Leading Small Organizations I. 3 Hours

Study of the methodology, qualities, and the development of leaders through a series of practical opportunities to lead small groups, receive personal assessments, encouragement, and lead again in situations of increasing complexity. Physical training, leadership laboratory, historical field trip, social events, and field training exercises are mandatory.

## MIL 302. Leading Small Organizations II. 3 Hours

Study of emplacement of communications equipment and weapons system. Application of small unit tactics, land navigation-terrain association, operations orders and roles of various branches of the Army. Physical training, leadership laboratory, social events, and field training exercises are mandatory.

## MIL 401. Leadership Management \& Staff. 3 Hours

Study of military staff functions; how to conduct meetings, briefing, and training; how to conduct various types of counseling; and effective and ineffective leadership techniques. Physical training, leadership laboratory, historical field trip, social events, and field training exercises are mandatory.

## MIL 402. Applied Leadership \& Management. 3 Hours

Leadership and management studies in professionalism, ethics, and military justice. Various types of military correspondence and the responsibilities of an officer. Physical training, leadership laboratory, field training exercises, and social events are mandatory.

MIL 411. Limited War/Low Intensity Conflict. 2 Hours
This course will identify and discuss the roles and mission of the branches found within the U.S. Army as they relate to limited war and low intensity conflicts. Historical examples of leadership in limited war/ low intensity conflicts are identified and discussed. Incorporates the background and experience of resident instructors and presentations by visiting service representatives.

## MIL 412. United States Military Today. 2 Hours

This course will identify and discuss the roles, missions, organizational structure and equipment, tactical and strategic employment, and future trends of the Armed Services. Incorporates the background and experience of resident instructors and presentations by visiting service representatives.

## MIL 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## MIL 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved MIL 477 and approval of University Honors Program.

## Music

Majors:

- Bachelor of Arts, Music- Ethnomusicology Concentration (p. 207)
- Bachelor of Arts, Music - Jazz Studies Concentration (p. 204)
- Bachelor of Arts, Music - Music Studies Concentration (p. 206)
- Bachelor of Music, Music Composition (p. 208)
- Bachelor of Music, Music Education - Instrumental Concentration (p. 209)
- Bachelor of Music, Music Education - Vocal Concentration (p. 211)
- Bachelor of Music, Music Performance (p. 212)
- Bachelor of Music, Music Therapy (p. 214)

Certificate:

- Church Music (p. 215)

Minor:

- Music (p. 216)
- Music Technology (p. 216)

Music is our passion. We help each student discover the transformative power of music and develop musical interests, talents and skills that they will use to change the world. The Department's goals include the following:

- To help students develop their unique musical potential as performer, composer, scholar, teacher, therapist, listener or advocate
- To provide abundant and diverse opportunities for group and individualized music learning
- To connect students and faculty with local and global resources
- To develop musical partnerships that reflect the University's motto: Learn, Lead, and Serve
- To cultivate a safe, respectful, inter-culturally responsive, and stimulating environment that supports student and faculty development (College of Arts and Sciences Diversity Vision Statement, October 2009)
- To prepare students through music with essential $21^{\text {st }}$ century skills to meet the changing needs of a global society

The Department of Music offers an outstanding and diverse undergraduate curriculum for music majors and non-music majors in a strong liberal arts setting. Faculty are engaged in the process of evaluating and revising existing courses and developing new ones to meet the general education requirements of the Common Academic Program (CAP) that is based on interdisciplinary content and teaching. Foundational ideas of the CAP include learner-centered teaching, education in the Catholic Marianist tradition, and integrative learning. The CAP student learning outcomes are based on UD's Habits of Inquiry, including scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation.

The Department of Music is a member of the National Association of Schools of Music, which accredits its degree programs and curricula. In addition, the music education degree program is approved by the State of Ohio and the music therapy degree program by the American Music Therapy Association.

The Department of Music has numerous performing ensembles open to all students:

- University Chorale
- Choral Union
- Opera Workshop
- Ebony Heritage Singers
- World Music Choir
- Hands in Harmony Signing Choir
- University Orchestra
- Symphonic Wind Ensemble
- University Concert Band
- "Pride of Dayton" Marching Band
- Javanese Gamelan
- Flyer Pep Band
- Dayton Jazz Ensemble
- University Jazz Band
- Flyer Jazz Lab Band
- Early Music Ensemble
- Chamber music groups
- Jazz Combos


## - Percussion Ensemble and Winter Drumline

The Department of Music offers the five degree programs listed below. Those majoring in the Bachelor of Arts with a major in Music (MUS) may choose from three concentration areas: Music Studies, Jazz Studies, or Ethnomusicology.

- Bachelor of Arts with a major in Music (MUS)
- Bachelor of Music with a major in Composition (MUC)
- Bachelor of Music with a major in Music Education (MUE)
- Bachelor of Music with a major in Performance (MUP)
- Bachelor of Music with a major in Music Therapy (MUT)

All prospective music students must be admitted to the University of Dayton by the Office of Admission and accepted through an audition process that includes the following:

1. Submission to the Department of Music two letters of recommendation from their high school music teachers and/or performance teachers and
2. Successful completion of a performance audition in person. Specific information regarding audition requirements and dates is available by calling the department office and visiting the department website (http://www.udayton.edu/artssciences/music).

The Department of Music offers a minor in music and a minor in music technology for non-music majors and a church music certificate.

Transfer students pursuing a major in MUC, MUP, or MUT must complete at least twenty-four of the required semester hours in the Department of Music while in residence at the University of Dayton. Transfer students pursuing a major in MUE must complete at least twenty of the required semester hours in the Department of Music while in residence at the University of Dayton. Transfer students pursuing a music minor must complete at least twelve of the required semester hours in the Department of Music while in residence.

## Faculty

Sharon Davis Gratto, Chairperson
Professors Emeriti: Benedum, Sandness, Snyder
Professors: Chenoweth, Cox, Gardstrom, Gratto, Hartley, Magnuson, Street
Associate Professors: Morris, Reynolds
Assistant Professors: Daniel-Cox, Dorf, Jones, MacLachlan, Rush
Lecturers: Hiller, Lehman, Kim, Kizer
Artists-in-Residence: Benjamin, Farris, Leslie, McCutcheon, Sievers

## Bachelor of Arts with a major in MusicJazz Studies Concentration (MUS) Minimum 124 Hours

The Bachelor of Arts (BA) with a concentration in Jazz Studies focuses on the musical and historical elements of jazz. Students will study:

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- Jazz improvisation
- Jazz performance
- Jazz theory
- Jazz history
- Jazz composition and arranging.
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Students also participate in both large and small jazz ensembles, which provide the opportunity to become skilled in the art of practice
and performance of jazz. To take advantage of the diverse academic environment at the University of Dayton, students are encouraged to earn a minor or to complete a second major within another discipline.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |

ENG 200 Writing Seminar II
Oral Communication
CMM 100 Principles of Oral Communication

| Mathematics | 3 |
| :--- | :--- |
| Social Science | 3 |


| Arts | 3 |
| :--- | :--- |
| Natural Sciences | 7 |

Crossing Boundaries variable

| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |
| Advanced Study |  |


| Philosophy and/or Religious Studies |
| :--- |
| Historical Studies |
| Diversity and Social Justice |
| Major Capstone |
| ( Completed with ASI 110 and ASI 120 . <br> 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |
| 3 Completed with ENG 200H or ASI 120. |


| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and Performing Arts, including MUS (May include CAP Arts) |  |  |
| L2 Profien | ficiency in a language other than English) | 0-11 |
| Literature | lude CAP Components) | 3 |
| Mathematic | luding MTH 205 (Satisfies CAP Mathematics) | 3 |
| Natural Sci | (Satisfies CAP Natural Science) | 1 |
| Social Scie | Includes CAP Social Science) | 12 |
| Major Req | ents | 45 |
| MUS 200 <br> (p. 203) | Recital Attendance (7 semesters) | 0 |
| MUS 241 <br> (p. 203) | Keyboard Comp I | 0 |
| MUS 242 <br> (p. 203) | Keyboard Comp II | 0 |
| $\begin{aligned} & \text { MUS } 250 \\ & \text { (p. 203) } \end{aligned}$ | Second Year Review | 0 |


| $\begin{aligned} & \text { MUS } 480 \\ & \text { (p. 203) } \end{aligned}$ | Capstone Project Sem (With MUS 481, satisfies CAP Major Capstone) | 1 |
| :---: | :---: | :---: |
| MUS 481 <br> (p. 203) | Capstone Proj Pres | 1 |
| Ensembles |  | 6 |
| $\begin{aligned} & \text { MUS } 390 \\ & \text { (p. 203) } \end{aligned}$ | Ensembles ${ }^{1}$ |  |
| $\begin{aligned} & \text { MUS } 494 \\ & \text { (p. 203) } \end{aligned}$ | Dayton Jazz Ensemble |  |
| Music History and | Literature | 9 |
| (MUS 301, MUS Historical Studies Social Justice.) | 302 satisfy CAP Integrative, and Advanced MUS 303 satisfies CAP Arts, and Diversity and |  |
| $\begin{aligned} & \text { MUS } 301 \\ & \text { (p. 203) } \end{aligned}$ | Mus Hist \& Lit I |  |
| or MUS 302 <br> (p. 203) | Mus Hist \& Lit II |  |
| $\begin{aligned} & \text { MUS } 303 \\ & \text { (p. 203) } \end{aligned}$ | Intro World Music |  |
| $\begin{aligned} & \text { MUS } 306 \\ & \text { (p. 203) } \end{aligned}$ | History-Amer Jazz |  |
| Music Theory and | Aural Skills | 14 |
| $\begin{aligned} & \text { MUS } 111 \\ & \text { (p. 203) } \end{aligned}$ | Theory of Music I |  |
| $\begin{aligned} & \text { MUS } 112 \\ & \text { (p. 203) } \end{aligned}$ | Theory of Music II |  |
| MUS 113 <br> (p. 203) | Aural Skills I |  |
| $\begin{aligned} & \text { MUS } 114 \\ & \text { (p. 203) } \end{aligned}$ | Aural Skills II |  |
| MUS 211 <br> (p. 203) | Theory of Music III |  |
| $\begin{aligned} & \text { MUS } 212 \\ & \text { (p. 203) } \end{aligned}$ | Theory of Music IV |  |
| MUS 218 (p. 203) | Jazz Pop Theory |  |

Performance studies, including functional keyboard skills 14
MUS 296 Func Keybd Skls I
(p. 203)

MUS 297 Func Keybd Skls II
(p. 203)

MUS 391 Jazz Improv I
(p. 203)

MUS 392 Jazz Improv II
(p. 203)

MUS 396 Jazz Kybd Harmony I
(p. 203)

MUS 397 Jazz Kybd Harmony I
(p. 203)

MUS 399 Performance Studies
(p. 203)
or MUS 499 Performance
(p. 203)
Breadth
ASI $150 \quad$ Intr to the Univ Exp
(p. 203)
Total Hours to total at least
1 Choose from any MUS 390 (p. 203). See course descriptions.
Bachelor of Arts with a major in Music-
Music Studies Concentration (mus)
Minimum 124 Hours

| Common Academic Program (CAP) |  |  |
| :--- | :--- | ---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humanities Commons ${ }^{1}$ | 12 |  |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I $^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |  |

ENG 200 Writing Seminar II
Oral Communication

CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts ..... 3

Crossing Boundaries variable
Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study
Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice
Major Capstone

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

| $l i b e r a l ~ S t u d i e s ~ C u r r i c u l u m ~$ |  |
| :--- | :---: |
| Creative and Performing Arts, including Music (May include CAP | 3 |
| Arts) |  |
| L2 Proficiency (Proficiency in a language other than English) | $0-11$ |
| Literature (May include CAP Components) | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) | 3 |
| Natural Sciences (Satisfies CAP Natural Science) | 11 |
| Social Sciences (Includes CAP Social Science) | 12 |


| Major Requirements |  | 45 |
| :---: | :---: | :---: |
| MUS 200 <br> (p. 203) | Recital Attendance (7 semesters) | 0 |
| $\begin{aligned} & \text { MUS } 240 \\ & \text { (p. 203) } \end{aligned}$ | Fund of Conducting | 2 |
| MUS 241 <br> (p. 203) | Keyboard Comp I | 0 |
| MUS 242 <br> (p. 203) | Keyboard Comp II | 0 |
| MUS 250 <br> (p. 203) | Second Year Review | 0 |
| MUS 480 <br> (p. 203) | Capstone Project Sem (With MUS 481, satisfies CAP Major Capstone) | 1 |
| MUS 481 <br> (p. 203) | Capstone Proj Pres | 1 |
| Ensembles |  | 4 |
| MUS 390 <br> (p. 203) | Ensembles ${ }^{1}$ |  |
| or MUS 491 <br> (p. 203) | University Orchestra |  |
| or MUS 492 <br> (p. 203) | Symphonic Wind Ens |  |
| or MUS 493 <br> (p. 203) | University Chorale |  |
| Music History and | Literature | 9 |
| MUS 301 <br> (p. 203) | Mus Hist \& Lit I (Satisfies CAP Integrative, and Advanced Historical Studies) |  |
| $\begin{aligned} & \text { MUS } 302 \\ & (p .203) \end{aligned}$ | Mus Hist \& Lit II |  |
| $\begin{aligned} & \text { MUS } 303 \\ & \text { (p. 203) } \end{aligned}$ | Intro World Music (Satisfies CAP Arts, and Diversity and Social Justice) |  |
| Music Theory and | Aural Skills | 16 |
| MUS 111 <br> (p. 203) | Theory of Music I |  |
| MUS 112 <br> (p. 203) | Theory of Music II |  |
| MUS 113 <br> (p. 203) | Aural Skills I |  |
| MUS 114 <br> (p. 203) | Aural Skills II |  |
| MUS 211 <br> (p. 203) | Theory of Music III |  |
| MUS 212 <br> (p. 203) | Theory of Music IV |  |
| MUS 213 <br> (p. 203) | Aural Skills III |  |
| MUS 214 <br> (p. 203) | Aural Skills IV |  |
| Performance stud | ies, including functional keyboard skills | 12 |
| MUS 296 <br> (p. 203) | Func Keybd Skls I |  |
| MUS 297 <br> (p. 203) | Func Keybd Skls II |  |
| MUS 298 <br> (p. 203) | Func Keybd Skls III |  |


| MUS 299 | Func Keybd Skls IV |
| :--- | :--- |
| (p. 203) |  |
| MUS 399 | Performance Studies |
| (p. 203) |  |
| or MUS 499 | Performance |
| (p. 203) |  |


| Breadth |  |  |
| :--- | ---: | ---: |
| ASI 150 | Intr to the Univ Exp | 1 |
| (p. 203) |  | 124 |

1 Choose from any MUS 390 (p. 203). See course descriptions.

## Bachelor of Arts with a major in MusicEthnomusicology Concentration (MUS) Minimum 124 Hours

The Bachelor of Arts with a major in Music (MUS) with a concentration in Ethnomusicology focuses on the diversity of the world's musical traditions. Students will participate in both the Western European classical music tradition (in private lessons and in choral or instrumental ensembles) and in musics from across the globe, including Black gospel, Javanese gamelan, American jazz and African choral singing. They will study European music theory in addition to transcription of unwritten musics. They will learn to analyze music in culture by studying anthropology as well, and will ultimately complete a minor in Anthropology. Students will conduct ethnographic fieldwork in order to become conversant with the essential research methods of ethnomusicology and anthropology, and during their senior year will complete a two-semester capstone project based on their fieldwork. To take advantage of the diverse academic environment at the University of Dayton, students are encouraged to complete a second major within another discipline.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3

| CMM 100 | Principles of Oral Communication |
| ---: | ---: |
| Mathematics | 3 |

Social Science 3
Arts 3
Natural Sciences 7

Crossing Boundaries variable
credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable <br> credit |
| :--- | :--- |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice
Major Capstone

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Liberal Studies Curriculum

Creative and Performing Arts, including Music (May include CAP 3 Arts)
L2 Proficiency (Proficiency in a language other than English) 0-11
Literature (May include CAP Components) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences 12

| ANT 150 | Cultural Anthropology (Satisfies CAP Diversity and <br> Social Justice) |
| :--- | :--- |
| ANT 306 | Culture \& Power (Satisfies CAP Inquiry) |
| SOC 101 | Principles of Sociology |
| SOC 394 | Popular Culture in Society |

Major Requirements 45

| MUS 200 | Recital Attendance (Recital Attendance 7 <br> semesters) | 0 |
| :--- | :--- | :--- |
| MUS 241 | Keyboard Competency I | 0 |
| MUS 242 | Keyboard Competency II | 0 |
| MUS 250 | Second Year Review |  |
| MUS 480 | Capstone Project Seminar (With MUS 481, <br> satisfies CAP Major Capstone) | 0 |
| MUS 481 | Capstone Project \& Presentation | 1 |
| Ensembles ${ }^{1}$ |  | 1 |

MUS 390 Ensembles
MUS 491 University Orchestra
or MUS 492 Symponic Wind Ensemble
or MUS 493 University Chorale
Music History and Literature 9

| MUS 301 | Music History \& Literature I (Satisfies CAP <br> Integrative, and Advanced Historial Studies) |
| :--- | :--- |
| MUS 302 | Music History \& Literature II |
| MUS 303 | Introduction to Music of the World (Satisfies CAP <br> Arts, and Diversity and Social Justice) |

Music Theory and Aural Skills 18

| MUS 111 | Theory of Music I |
| :--- | :--- |
| MUS 112 | Theory of Music II |
| MUS 113 | Aural Skills I |
| MUS 114 | Aural Skills II |
| MUS 211 | Theory of Music III |
| MUS 212 | Theory of Music IV |
| MUS 213 | Aural Skills III |
| MUS 214 | Aural Skills IV |

MUS 217 Listening \& Transcription Skills

| Performance studies, including functional keyboard skills |  |
| :--- | :--- |
| MUS 296 | Functional Keyboard Skills I |
| MUS 297 | Functional Keyboard Skills II |
| MUS 399 | Performance Studies |
| or MUS 499 | Performance Studies |

Breadth
ASI $150 \quad$ Introduction to the University Experience 1
Supporting Social Science 9

| ANT 352 | Cultures of Latin America |
| :--- | :--- |
| ANT 356 | Cultures of Africa |
| ANT 360 | Cultures of South Asia |

Academic electives to total at least 124
1 Must include at least one semester of Ebony Heritage Singers (1), World Music Choir (.5), Gamelan (.5), Choral Union (1), Marching Band (1), and University Jazz Bands (1), for a total of 6 credits. Must also include two semesters of MUS 491 University Orchestra (1) or MUS 492 Symphonic Wind Ensemble (1) or MUS 493 University Chorale (1); MUS 390-level ensembles may be substituted for MUS 491,492 , or 493 if necessary, with the approval of the student's academic advisor.

## Bachelor of Music with a major in Music Composition (muc) Minimum 137 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3
$\begin{array}{ll}\text { CMM } 100 \text { Principles of Oral Communication } \\ \text { Nathematics } & 3\end{array}$
Social Science 3
Arts 3

| Natural Sciences | 7 |
| :--- | ---: |
| Crossing Boundaries | varia |
|  | cred |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |


| Advanced Study | varia <br> credi |
| :--- | ---: |
| Philosophy and/or Religious Studies |  |
| Historical Studies | 3 |
| Diversity and Social Justice | $0-3$ |
| Major Capstone |  |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## BM Requirements

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 7
Social Sciences (Includes CAP Social Science) 6
Major Requirements 87
MUS 200 Recital Attendance (7 semesters) 0
(p. 203)

MUS 202 Prof Dev Workshops (7 semesters) 0
(p. 203)

MUS 241 Keyboard Comp I 0
(p. 203)

MUS 242 Keyboard Comp II 0
(p. 203)

MUS 250 Second Year Review 0
(p. 203)

MUS 314 Score Reading 2
(p. 203)

MUS 450 Degree Recital (2 required. Satisfies CAP Major 0
(p. 203) Capstone.)

Composition ${ }^{1} 12$

| MUS 121 | Composition I |
| :--- | :--- |
| (p. 203) |  |
| MUS 122 <br> (p. 203) | Composition I |
| MUS 221 | Composition II |
| (p. 203) |  |
| MUS 222 | Composition II |
| (p. 203) |  |
| MUS 321 <br> (p. 203) | Composition III |
| MUS 322 | Composition III |
| (p. 203) <br> MUS 421 <br> (p. 203) | Composition IV |
| MUS 422 <br> (p. 203) <br> onducting |  |

MUS 240 Fund of Conducting
(p. 203)

MUS 345 Choral Conducting
(p. 203)
or MUS 346 Instr Conducting
(p. 203)

Ensembles
MUS 491
University Orchestra ${ }^{2}$
(p. 203)
or MUS 492 Symphonic Wind Ens
(p. 203)
or MUS 493 University Chorale
(p. 203)

Music History and Literature
9

| $\begin{aligned} & \text { MUS } 301 \\ & \text { (p. 203) } \end{aligned}$ | Mus Hist \& Lit I (Satisfies CAP Integrative, and Advanced Historical Studies) |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { MUS } 302 \\ & \text { (p. 203) } \end{aligned}$ | Mus Hist \& Lit II |  |
| $\begin{aligned} & \text { MUS } 303 \\ & \text { (p. 203) } \end{aligned}$ | Intro World Music (Satisfies CAP Arts, and Diversity and Social Justice) |  |
| Music Theory and | Aural Skills | 16 |
| MUS 111 <br> (p. 203) | Theory of Music I |  |
| MUS 112 <br> (p. 203) | Theory of Music II |  |
| MUS 113 <br> (p. 203) | Aural Skills I |  |
| MUS 114 <br> (p. 203) | Aural Skills II |  |
| MUS 211 <br> (p. 203) | Theory of Music III |  |
| MUS 212 <br> (p. 203) | Theory of Music IV |  |
| MUS 213 <br> (p. 203) | Aural Skills III |  |
| MUS 214 <br> (p. 203) | Aural Skills IV |  |
| Orchestration or arranging |  | 4 |
| MUS 316 <br> (p. 203) | Fund of Orchestration |  |
| or MUS 318 <br> (p. 203) | Fund of Arranging |  |
| MUS 416 <br> (p. 203) | Adv Orchestration |  |
| Performance Studies ${ }^{3}$ |  | 12 |
| MUS 296 <br> (p. 203) | Func Keybd Skls I |  |
| $\begin{aligned} & \text { MUS } 297 \\ & \text { (p. 203) } \end{aligned}$ | Func Keybd Skls II |  |
| MUS 298 <br> (p. 203) | Func Keybd Skls III |  |
| $\begin{aligned} & \text { MUS } 299 \\ & (p .203) \end{aligned}$ | Func Keybd Skls IV |  |
| $\begin{aligned} & \text { MUS } 399 \\ & (p .203) \end{aligned}$ | Performance Studies |  |
| or MUS 499 <br> (p. 203) | Performance |  |
| MUS electives |  | 10 |
| Theory and/or co | mposition electives | 10 |
| Breadth |  |  |
| ASI 150 <br> (p. 203) | Intr to the Univ Exp | 1 |
| Non-music electives |  | 9 |
| Total Hours to total at least |  | 137 |
| 1 Each composition major must present one and a half recitals of original work by the senior year. |  |  |

## 2 May substitute MUS 390 (p. 203) with permission. <br> 3 Functional Keyboard Skills or equivalent is required. <br> Bachelor of Music with a major in Music Education-INSTRUMENTAL CONCENTRATION (mue) Minimum 146 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable credit
Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## BM Requirements

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 7
Social Sciences (Includes CAP Social Science) 3
Major Requirements ${ }^{1} 84$
MUS $200 \quad$ Recital Attendance (7 semesters) 0
(p. 203)

MUS 202 Prof Dev Workshops 0
(p. 203)

MUS 231 Intro to Mus Ed 2
(p. 203)

| MUS 240 <br> (p. 203) | Fund of Conducting | 2 |
| :---: | :---: | :---: |
| MUS 241 <br> (p. 203) | Keyboard Comp I | 0 |
| MUS 242 <br> (p. 203) | Keyboard Comp II | 0 |
| MUS 250 <br> (p. 203) | Second Year Review | 0 |
| MUS 318 <br> (p. 203) | Fund of Arranging | 2 |
| MUS 331 <br> (p. 203) | Choral Mus Methods | 3 |
| MUS 332 <br> (p. 203) | Instru Mus Methods | 3 |
| MUS 335 <br> (p. 203) | Classroom Mus Mthds | 3 |
| $\begin{aligned} & \text { MUS } 340 \\ & \text { (p. 203) } \end{aligned}$ | Mus Ed for Spec Needs | 2 |
| MUS 450 <br> (p. 203) | Degree Recital (Satisfies CAP Major Capstone) | 0 |
| Performance Studies (7 semesters) ${ }^{2}$ |  | 14 |
| MUS 399 <br> (p. 203) | Performance Studies |  |
| Ensembles |  | 6 |
| MUS 390 <br> (p. 203) | Ensembles (1 semester) |  |
| Select five semesters from: |  |  |
| MUS 491 <br> (p. 203) | University Orchestra |  |
| or MUS 492 <br> (p. 203) | Symphonic Wind Ens |  |
| or MUS 493 <br> (p. 203) | University Chorale |  |
| Functional Keyboard Skills |  | 4 |
| MUS 296 <br> (p. 203) | Func Keybd Skls I |  |
| MUS 297 <br> (p. 203) | Func Keybd Skls II |  |
| MUS 298 <br> (p. 203) | Func Keybd Skls III |  |
| $\begin{aligned} & \text { MUS } 299 \\ & (\text { p. 203) } \end{aligned}$ | Func Keybd Skls IV |  |
| Music History and Literature |  | 9 |
| MUS 301 <br> (p. 203) | Mus Hist \& Lit I (Satisfies CAP Integrative, and Advanced Historical Studies) |  |
| MUS 302 <br> (p. 203) | Mus Hist \& Lit II |  |
| MUS 303 <br> (p. 203) | Intro World Music (Satisfies CAP Arts, and Diversity and Social Justice) |  |
| Music Theory and Aural Skills |  | 16 |
| MUS 111 <br> (p. 203) | Theory of Music I |  |
| MUS 112 <br> (p. 203) | Theory of Music II |  |
| $\begin{aligned} & \text { MUS } 113 \\ & \text { (p. 203) } \end{aligned}$ | Aural Skills I |  |


| MUS 114 | Aural Skills II |
| :--- | :--- |
| (p. 203) |  |
| MUS 211 | Theory of Music III |
| (p. 203) |  |
| MUS 212 | Theory of Music IV |
| (p. 203) |  |
| MUS 213 | Aural Skills III |
| (p. 203) |  |
| MUS 214 | Aural Skills IV |
| (p. 203) |  |

Additional Requirements for Instrumental Concentration ${ }^{3}$


Select a minimum of 6 elective semester hours from: 6
MUS 233 Eurhythmics
(p. 203)

MUS 295 Beg Guitar Class II
(p. 203)

MUS 338 Percussn Pedagogy
(p. 203)

MUS 345 Choral Conducting
(p. 203)

MUS 346 Instr Conducting
(p. 203)

MUS 381 Clin Educ Improv I
(p. 203)

MUS 399 Performance Studies (may be repeated)
(p. 203)

MUS 408 Dictn\&Lit-Singrs
(p. 203)

MUS 430 Jazz Pedagogy
(p. 203)

MUS 431 Marching Band Pedagy
(p. 203)

## Teacher Education

EDT 110 Profession-Teachng
(p. 203)

EDT 110L Prfssn Tchng Lab
(p. 203)

| EDT 207 | Chld\&Adol In Eductn |
| :--- | :--- |
| (p. 203) |  |

(p. 203)

Chld\&Adol In Eductn

| EDT 207L | Chld \& Adlsct Ed Lab |
| :--- | :--- |
| (p. 203) |  |
| EDT 305 | Phil\&Hist of Amer Ed (Satisfies CAP Practical |
| (p. 203) | Ethical Action, and Advanced Study in Philosophy) |
| EDT 459 | Crt Rdg Wrtg Cnt Ar |
| (p. 203)  <br> EDT 479 Stdt Tchng-Mus K-12 <br> (p. 203) $\$$. |  |

## Breadth

ASI $150 \quad$ Intr to the Univ Exp 1
(p. 203)

Total Hours to total at least
1 Students in the music education program are required to maintain a 2.5 cumulative grade point average, a 2.5 cumulative average in teacher education courses, and a 2.5 cumulative average in music courses. Students must earn a grade of C - or higher in the following core music education courses: MUS 331 (p. 203), MUS 332 (p. 203) and MUS 335 (p. 203).
2 On principal instrument.
3 Students will select one of two concentration areas (instrumental or vocal). Upon successful completion of the degree and Praxis 2 exam, candidates will receive a Resident Educator License (Four Year, Multi-age, P-12) from the State of Ohio to teach music from pre-kindergarten through senior high school.

## Bachelor of Music with a major in Music Education-VOCAL CONCENTRATION (mue) Minimum 146 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$

ENG 200 Writing Seminar II
Oral Communication 3
$\begin{aligned} \text { CMM } 100 & \text { Principles of Oral Communication } \\ \text { Mathematics } & 3\end{aligned}$
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable
credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative

Advanced Study variable
Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice ..... 3
Major Capstone ..... 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## BM Requirements

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 7
Social Sciences (May include CAP Social Science) 3
Major Requirements ${ }^{1} 84$
MUS 200 Recital Attendance (7 semesters) 0
(p. 203)

MUS $202 \quad$ Prof Dev Workshops (7 semesters) 0
(p. 203)

MUS 231 Intro to Mus Ed 2
(p. 203)

MUS 240 Fund of Conducting 2
(p. 203)

MUS 241 Keyboard Comp I 0
(p. 203)

MUS 242 Keyboard Comp II 0
(p. 203)

MUS 250 Second Year Review 0
(p. 203)

MUS $318 \quad$ Fund of Arranging 2
(p. 203)

MUS 331 Choral Mus Methods 3
(p. 203)

MUS 332 Instru Mus Methods 3
(p. 203)

MUS 335 Classroom Mus Mthds 3
(p. 203)

MUS 340 Mus Ed for Spec Needs 2
(p. 203)

MUS 450 Degree Recital (Satisfies CAP Major Capstone) 0
(p. 203)

Performance Studies (7 semesters) ${ }^{2}$
$\begin{array}{ll}\text { MUS } 399 & \text { Performance Studies }\left(7 \text { semesters) }{ }^{2}\right.\end{array}$
Ensembles 6
MUS 390 Ensembles (1 semester)
(p. 203)

Select five semesters from:
MUS 491 University Orchestra
(p. 203)
or MUS 492 Symphonic Wind Ens
(p. 203)
or MUS 493 University Chorale
(p. 203)

Functional Keyboard Skills
MUS 296 Func Keybd Skls I
(p. 203)

| MUS 297 <br> (p. 203) | Func Keybd Skls II |  | MUS 338 <br> (p. 203) | Percussn Pedagogy |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MUS 298 <br> (p. 203) | Func Keybd Skls III |  | MUS 345 <br> (p. 203) | Choral Conducting |  |
| MUS 299 <br> (p. 203) | Func Keybd Skls IV |  | MUS 346 <br> (p. 203) | Instr Conducting |  |
| Music History and | Literature | 9 | MUS 381 | Clin Educ Improv I |  |
| MUS 301 <br> (p. 203) | Mus Hist \& Lit I (Satisfies CAP Integrative, and Advanced Historical Studies) |  | (p. 203) |  |  |
|  |  |  | MUS 399 | Performance Studies (on secondary instrument, may be repeated) |  |
| $\begin{aligned} & \text { MUS } 302 \\ & \text { (p. 203) } \end{aligned}$ | Mus Hist \& Lit II |  | (p. 203) |  |  |
|  |  |  | $\begin{aligned} & \text { MUS } 408 \\ & \text { (p. 203) } \end{aligned}$ |  |  |
| $\begin{aligned} & \text { MUS } 303 \\ & \text { (p. 203) } \end{aligned}$ | Intro World Music (Satisfies CAP Arts, and Diversity and Social Justice) |  |  | Dictn\&Lit-Singrs |  |
|  |  |  | MUS 430 | Jazz Pedagogy |  |
| Music Theory and Aural Skills |  | 16 | (p. 203) Jazz Pedagogy |  |  |
| MUS 111 <br> (p. 203) | Theory of Music I |  | $\begin{aligned} & \text { MUS } 431 \\ & \text { (p. 203) } \end{aligned}$ | Marching Band Pedagy |  |
| MUS 112 <br> (p. 203) | Theory of Music II |  | Teacher Education 25 |  |  |
|  |  |  | $\begin{aligned} & \text { EDT } 110 \\ & \text { (p. 203) } \end{aligned}$ | Profession-Teachng |  |
| $\begin{aligned} & \text { MUS } 113 \\ & (p .203) \end{aligned}$ | Aural Skills I |  |  |  |  |
|  |  |  | EDT 110L(p. 203) | Prfssn Tchng Lab |  |
| $\begin{aligned} & \text { MUS } 114 \\ & \text { (p. 203) } \end{aligned}$ | Aural Skills II |  |  |  |  |
|  |  |  | EDT 207 | Chld\&Adol In Eductn |  |
| MUS 211 <br> (p. 203) | Theory of Music III |  | (p. 203) |  |  |
|  |  |  | $\begin{aligned} & \text { EDT 207L } \\ & \text { (p. 203) } \end{aligned}$ | Chld \& Adlsct Ed Lab |  |
| $\begin{aligned} & \text { MUS } 212 \\ & \text { (p. 203) } \end{aligned}$ | Theory of Music IV |  |  |  |  |
|  |  |  | $\begin{aligned} & \text { EDT } 305 \\ & \text { (p. 203) } \end{aligned}$ |  |  |
| $\begin{aligned} & \text { MUS } 213 \\ & \text { (p. 203) } \end{aligned}$ | Aural Skills III |  |  | Ethical Action, and Advanced Study in Philosophy) |  |
|  |  |  | EDT $459 \quad$ Crt Rdg Wrtg Cnt Ar(p. 203) |  |  |
| MUS 214 <br> (p. 203) | Aural Skills IV |  |  |  |  |  |  |
|  |  |  | $\begin{aligned} & \text { EDT } 479 \\ & \text { (p. 203) } \end{aligned}$ | Stdt Tchng-Mus K-12 |  |
| Additional requirements for Vocal Concentration ${ }^{3}$ |  |  |  |  |  |
| MUS 408 <br> (p. 203) | Dictn\&Lit-Singrs | 2 | Breadth |  |  |
| Ensembles |  | 1 | $\begin{aligned} & \text { ASI } 150 \\ & \text { (p. 203) } \end{aligned}$ | Intr to the Univ Exp | 1 |
| $\begin{aligned} & \text { MUS } 390 \\ & \text { (p. 203) } \end{aligned}$ | Ensembles (instrumental) |  | Total Hours to total at least 146 |  |  |
| Music Education |  | 7 | 1 Students in the music education program are required to maintain |  |  |
| MUS 195 <br> (p. 203) | Beg Guitar Class I |  | a 2.5 cumulative grade point average, a 2.5 cumulative average in teacher education courses, and a 2.5 cumulative average in music courses. Students must earn a grade of C- or higher in the following core music education courses: MUS 331 (p. 203), MUS 332 (p. 203) and MUS 335 (p. 203). |  |  |
| MUS 295 <br> (p. 203) | Beg Guitar Class II |  |  |  |  |  |  |
| MUS 235 <br> (p. 203) | Voice Pedagogy |  | 2 On principal instrument. |  |  |
| or MUS 236 <br> (p. 203) | Voice Lab |  | 3 Students will select one of two concentration areas (instrumental or vocal). Upon completion of the degree and Praxis 2 exam, candidates will receive a Resident Educator License (Four Year, Multi-age, P-12) from the State of Ohio to teach music from prekindergarten through senior high school. |  |  |
| MUS 237 <br> (p. 203) | Brass Instrument Lab |  |  |  |  |  |  |
| $\begin{aligned} & \text { MUS } 238 \\ & \text { (p. 203) } \end{aligned}$ | WW Instrument Lab |  | kindergarten through senior high school. |  |  |
| MUS 338 <br> (p. 203) | Percussn Pedagogy |  |  |  |  |
| MUS 339 | String Pedagogy |  | Common Academic Program (CAP) |  |  |
| (p. 203) |  |  | *credit hours will vary depending on courses selected |  |  |
| Select a minimum of 8 elective semester hours from: |  | 8 | First-Year Humanities Commons ${ }^{1}$ |  | 12 |
| MUS 233 <br> (p. 203) | Eurhythmics |  | HST 103 | The West \& the World |  |



3 Voice majors must take MUS 235 (p. 203) and MUS 408 (p. 203); piano majors must include MUS 405 (p. 203) and MUS 435 (p. 203); instrumental majors must take a pedagogy course in their area of specialization. Wind, string, brass and percussion majors should register for the appropriate pedagogy course in their area of performance (MUS 336 (p. 203)-MUS 339 (p. 203)). Majors are strongly urged to register for a Special Topics class with their performance instructor chosen to complement other performance studies.

4 Voice majors must include two semesters of foreign language study.

## Bachelor of Music with a major in Music Therapy (mut) Minimum 134 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$

ENG 200 Writing Seminar II
Oral Communication 3

CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3

Arts 3
Natural Sciences 7

| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## BM Requirements

Mathematics (Satisfies CAP Mathematics) ${ }^{1} 3$
Natural Sciences, includes: 7
HSS 305 Human Anatomy (Applies to CAP Natural Science)
(p. 203)
Lecture with Lab
Social Sciences (Includes CAP Social Science)

| Major Requirements |  | 87 |
| :---: | :---: | :---: |
| MUS 200 <br> (p. 203) | Recital Attendance (7 semesters) | 0 |
| MUS 202 <br> (p. 203) | Prof Dev Workshops (7 semesters) | 0 |
| MUS 241 <br> (p. 203) | Keyboard Comp I | 0 |
| MUS 242 <br> (p. 203) | Keyboard Comp II | 0 |
| MUS 250 <br> (p. 203) | Second Year Review | 0 |
| MUS 450 <br> (p. 203) | Degree Recital (Satisfies CAP Major Capstone) | 0 |
| MUS 489 <br> (p. 203) | Mus Therapy Intrnshp ${ }^{2}$ | 2 |
| Conducting and Arranging |  | 4 |
| MUS 240 <br> (p. 203) | Fund of Conducting |  |
| MUS 318 <br> (p. 203) | Fund of Arranging |  |
| Ensembles |  | 6 |
| MUS 491 <br> (p. 203) | University Orchestra |  |
| or MUS 492 <br> (p. 203) | Symphonic Wind Ens |  |
| or MUS 493 <br> (p. 203) | University Chorale |  |
| Music History and Literature |  | 9 |
| $\begin{aligned} & \text { MUS } 301 \\ & \text { (p. 203) } \end{aligned}$ | Mus Hist \& Lit I (Satisfies CAP Integrative, and Advanced Historical Studies) |  |
| MUS 302 <br> (p. 203) | Mus Hist \& Lit II |  |
| $\begin{aligned} & \text { MUS } 303 \\ & \text { (p. 203) } \end{aligned}$ | Intro World Music (Satisfies CAP Arts, and Diversity and Social Justice) |  |
| Music Theory and Aural Skills |  | 16 |
| $\begin{aligned} & \text { MUS } 111 \\ & \text { (p. 203) } \end{aligned}$ | Theory of Music I |  |
| MUS 112 <br> (p. 203) | Theory of Music II |  |
| $\begin{aligned} & \text { MUS } 113 \\ & (p .203) \end{aligned}$ | Aural Skills I |  |
| $\begin{aligned} & \text { MUS } 114 \\ & (p .203) \end{aligned}$ | Aural Skills II |  |
| MUS 211 <br> (p. 203) | Theory of Music III |  |
| $\begin{aligned} & \text { MUS } 212 \\ & (p .203) \end{aligned}$ | Theory of Music IV |  |
| MUS 213 <br> (p. 203) | Aural Skills III |  |
| MUS 214 <br> (p. 203) | Aural Skills IV |  |
| Music Therapy, including core courses and practica |  | 27 |
| $\begin{aligned} & \text { MUS } 233 \\ & (p .203) \end{aligned}$ | Eurhythmics |  |
| MUS 282 <br> (p. 203) | Func Mus Thrpy Skls |  |


| $\begin{aligned} & \text { MUS } 285 \\ & \text { (p. 203) } \end{aligned}$ | Intro Mus Therapy |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { MUS } 286 \\ & \text { (p. 203) } \end{aligned}$ | Mus Therapy Methods |  |
| $\begin{aligned} & \text { MUS } 287 \\ & \text { (p. 203) } \end{aligned}$ | Practom Mus Thrpy 1 |  |
| $\begin{aligned} & \text { MUS } 288 \\ & \text { (p. 203) } \end{aligned}$ | Practm Mus Thrpy II |  |
| $\begin{aligned} & \text { MUS } 289 \\ & \text { (p. 203) } \end{aligned}$ | Practm Mus Thrpy III |  |
| $\begin{aligned} & \text { MUS } 290 \\ & \text { (p. 203) } \end{aligned}$ | Mus Ther Treat Proc |  |
| $\begin{aligned} & \text { MUS } 381 \\ & \text { (p. 203) } \end{aligned}$ | Clin Educ Improv I |  |
| $\begin{aligned} & \text { MUS } 382 \\ & \text { (p. 203) } \end{aligned}$ | Clin Educ Improv II |  |
| $\begin{aligned} & \text { MUS } 385 \\ & \text { (p. 203) } \end{aligned}$ | Music Therapy Prin |  |
| $\begin{aligned} & \text { MUS } 386 \\ & \text { (p. 203) } \end{aligned}$ | Music \& Psychothrpy |  |
| $\begin{aligned} & \text { MUS } 387 \\ & \text { (p. 203) } \end{aligned}$ | Practm Mus Thrpy IV |  |
| $\begin{aligned} & \text { MUS } 388 \\ & \text { (p. 203) } \end{aligned}$ | Practm Mus Thrpy V |  |
| $\begin{aligned} & \text { MUS } 486 \\ & \text { (p. 203) } \end{aligned}$ | Mus Therapy Research |  |
| Performance Studies ${ }^{3}$ |  | 10 |
| $\begin{aligned} & \text { MUS } 399 \\ & \text { (p. 203) } \end{aligned}$ | Performance Studies |  |
| Vocal and instrumental methods, including accompanying instruments of piano and guitar: |  | 8 |
| MUS 195 <br> (p. 203) | Beg Guitar Class I |  |
| $\begin{aligned} & \text { MUS } 295 \\ & \text { (p. 203) } \end{aligned}$ | Beg Guitar Class II |  |
| $\begin{aligned} & \text { MUS } 296 \\ & \text { (p. 203) } \end{aligned}$ | Func Keybd Skls I |  |
| $\begin{aligned} & \text { MUS } 297 \\ & \text { (p. 203) } \end{aligned}$ | Func Keybd Skls II |  |
| $\begin{aligned} & \text { MUS } 298 \\ & \text { (p. 203) } \end{aligned}$ | Func Keybd Skls III |  |
| $\begin{aligned} & \text { MUS } 299 \\ & \text { (p. 203) } \end{aligned}$ | Func Keybd Skls IV |  |
| $\begin{aligned} & \text { MUS } 338 \\ & \text { (p. 203) } \end{aligned}$ | Percussn Pedagogy ${ }^{4}$ |  |
| Select one semester hour from: |  |  |
| MUS 237 <br> (p. 203) | Brass Instrument Lab |  |
| MUS 238 <br> (p. 203) | WW Instrument Lab |  |
| $\begin{aligned} & \text { MUS } 293 \\ & \text { (p. 203) } \end{aligned}$ | Organ Class |  |

Music and dance electives

| Breadth |  |  |
| :--- | :--- | :---: |
| ASI 150 <br> (p. 203) | Intr to the Univ Exp | 1 |
| PSY 101 <br> (p. 203) | Introductory Psych (Satisfies CAP Social Science) | 3 |
| PSY 351 <br> (p. 203) | Child Psychology | 3 |
| PSY 355 <br> (p. 203) | Devlp Psychpath | 3 |
| PSY 363 <br> (p. 203) | Abnormal Psychology | 3 |
| Total Hours to total at least | 134 |  |

1 MTH 207 recommended.
2 This internship of a minimum of 900 hours is taken after student completes all other course requirements. In order to be recommended for an internship, the student must 1) demonstrate certain skills, characteristics, and dispositions required in the music therapy profession, 2) earn a grade of C- or better in each music therapy course, and 3) have an overall grade point average of at least 2.00 and a grade point average of at least 2.50 in music, music therapy, and psychology coursework. Upon earning a grade of Cor better in an internship, the graduate is eligible to take a national certification examination to become a Music Therapist - Board Certified.
3 Performance studies on the student's principal instrument leading to a minimum of a half-recital during the junior or senior year.
4 One semester of MUS 338 (p. 203) must be completed for a total of one semester hour.

## Certificate in Church Music (MCh)

## Church Music

| MUS 110 <br> (p. 203) | Fundamentals of Mus ${ }^{1}$ | 2 |
| :---: | :---: | :---: |
| MUS 350 <br> (p. 203) | Sacred Music Hst | 3 |
| $\begin{aligned} & \text { MUS } 351 \\ & \text { (p. 203) } \end{aligned}$ | Church Music Admin | 2 |
| $\begin{aligned} & \text { MUS } 390 \\ & (\text { p. 203) } \end{aligned}$ | Ensembles | 1 |
| $\begin{aligned} & \text { MUS } 399 \\ & \text { (p. 203) } \end{aligned}$ | Performance Studies | 1-2 |
| $\begin{aligned} & \text { MUS } 452 \\ & (\text { p. 203) } \end{aligned}$ | Contemp Litgcl Mus Rep | 2 |
| $\begin{aligned} & \text { MUS } 459 \\ & \text { (p. 203) } \end{aligned}$ | Church Music Internship | 2 |
| $\begin{aligned} & \text { REL } 446 \\ & \text { (p. 203) } \end{aligned}$ | Chrstn Liturgy ${ }^{2}$ | 3 |
| Select one course | from: | 2 |
| $\begin{aligned} & \text { MUS } 240 \\ & (\mathrm{p.} \mathrm{203)} \end{aligned}$ | Fund of Conducting |  |
| MUS 545 <br> (p. 203) | Adv Choral Cond |  |

Select six semester hours from:
MUS 318 Fund of Arranging
(p. 203)

| MUS 461 | ST:Church Music |
| :--- | :--- |
| (p. 203) |  |
| MUS 505 | Teach Music w/Tech I |
| (p. 203) |  |
| MUS 506 <br> (p. 203) | Teach Music w/Technology II |

Total Hours
24-25

1 May substitute additional credits in performance studies or church music workshops for MUS 110 (p. 203).
2 Or two to three semester hours of a suitable religious studies course.

## Minor in Music (mus)

## Music

Select one track from: 22

## Track A:

| MUS 115 | Music Theory Prac |
| :--- | :--- |
| (p. 203) |  |
| MUS 116 | Music Theory Prac |
| (p. 203) |  |
| MUS 217 | Listen \& Transcrip |
| (p. 203) |  |
| or MUS 218 | Jazz Pop Theory |
| (p. 203) |  |
| MUS 301 | Mus Hist \& Lit I |
| (p. 203) |  |
| MUS 302 <br> (p. 203) | Mus Hist \& Lit II |

Select MUS electives (8 hours) ${ }^{1,2}$
Track B:

| MUS 111 | Theory of Music I |
| :--- | :--- |
| (p. 203) |  |
| MUS 112 | Theory of Music II |
| (p. 203) |  |
| MUS 113 | Aural Skills I |
| (p. 203) |  |
| MUS 114 | Aural Skills II |
| (p. 203) |  |
| MUS 301 | Mus Hist \& Lit I |
| (p. 203) |  |
| MUS 302 | Mus Hist \& Lit II |
| (p. 203) |  |

Select MUS electives (8 hours) ${ }^{1,2}$
Total Hours
1 Must include six semester hours at the 300/400 level.
2 No more than two semester hours of ensemble (MUS 390 (p. 203), MUS 491 (p. 203), MUS 492 (p. 203), MUS 493 (p. 203)) will count toward the minor.

## Minor in Music Technology (mTC)

## Music Technology

Select one music theory option from:
Option A

| MUS 115 | Music Theory Prac |
| :--- | :--- |
| (p. 203) |  |
| MUS 116 | Music Theory Prac |
| (p. 203) |  |
| MUS 217 | Listen \& Transcrip |
| (p. 203) |  |
| or MUS 218  <br> (p. 203) Jazz Pop Theory <br>  . |  |

Option B

| MUS 111 | Theory of Music I |
| :--- | :--- |
| (p. 203) |  |
| MUS 112 | Theory of Music II |
| (p. 203)  <br> MUS 113 Aural Skills I <br> (p. 203)  <br> MUS 114 Aural Skills II <br> (p. 203)  |  |

Applied Studies ${ }^{1} \quad 6$

MUS 399 Performance Studies
(p. 203)

MUS 499 Performance
(p. 203)
Ensembles ${ }^{2} \quad 2$

| MUS 390 | Ensembles $^{3}$ |
| :--- | :--- |
| (p. 203) |  |
| MUS 491 | University Orchestra |
| (p. 203) |  |
| MUS 492 | Symphonic Wind Ens |
| (p. 203) |  |
| MUS 493 | University Chorale |
| (p. 203) |  |

Music History and Literature 3
MUS 301 Mus Hist \& Lit I
(p. 203)

MUS 302 Mus Hist \& Lit II
(p. 203)

MUS 303 Intro World Music
(p. 203)

Music Technology 5
MUS 223 Intro Music Tech
(p. 203)

MUS 323 Rec\&Digital Media
(p. 203)

Total Hours
1 Take a total of six semester hours from any combination of these courses.
2 Take a total of two semester hours from any combination of these courses.
3 Choose from any MUS 390 (p. 203). See course descriptions.

## Courses

MUS 104. Music Literature for the Elementary Classroom. 2 Hours Study of music literature and its direct application to elementary classroom use.

## MUS 110. Fundamentals of Music. 2 Hours

For the student with no previous experience with theory of music. Notation of music, key and time signatures, fundamental harmonic progression, and introduction to the piano keyboard. Elementary ear training and dictation. Open to all University students.

## MUS 111. Theory of Music I. 2 Hours

Basic vocabulary and grammar of music: fundamentals (intervals, scales, modes, keys, triads), and counterpoint studies. Assignments are done with computer notation programs, and portions of the course use webbased texts.

## MUS 112. Theory of Music II. 2 Hours

Basic diatonic and chromatic harmonic vocabulary studies, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 111 with a grade of C- or better) or permission of instructor.

## MUS 113. Aural Skills I. 2 Hours

The hearing of musical structure is developed through active listening to representative pieces from music literature. Emphasis on formal relations, musical development and historical styles. Introduction to solfege singing and music transcription.

## MUS 114. Aural Skills II. 2 Hours

Further developing the ability to hear musical structure through transcription of intervals, melody, rhythm and harmonic patterns and short musical compositions of music in representative stylistic categories. Use of solfege singing to represent students' internalization of melodic structure. Prerequisite(s): (MUS 113 with a grade of C- or better) or permission of instructor.

## MUS 115. Music in Theory \& Practice. 3 Hours

Music theory studies in an historical context, appropriate for non-music majors. Fundamentals of music vocabulary and music prior to 1600: origins of melody and counterpoint. Aural skills incorporated into daily classes. Open to all University students. Prerequisite(s): At least one year of instrument/voice studies which required note-reading ability. Corequisite(s): Current performance studies or active participation in a music ensemble which requires note-reading skills.

MUS 116. Music in Theory \& Practice. 3 Hours
Continuation of MUS 115: music between 1600-1900, harmony and analysis. Aural skills incorporated into daily classes. Prerequisite(s): MUS 115. Corequisite(s): Current performance studies or active participation in a music ensemble which requires note-reading skills.

## MUS 121. Composition I. 1 Hour

2Supplemental explorations for majors in music composition, to accompany work in MUS 111-112. Basic notational practices and application of traditional techniques to the creative process. Prerequisite(s): MUS 111 (may be taken as a corequisite).

## MUS 122. Composition I. 1 Hour

Supplemental explorations for majors in music composition, to accompany work in MUS 111-112. Basic notational practices and application of traditional techniques to the creative process. Prerequisite(s): MUS 112 (may be taken as a corequisite). Corequisite(s): MUS 121.

MUS 191. Voice Class. 2 Hours
Basic principles of good singing; development of the voice; vocal literature. Open to all students, especially non-music majors.

## MUS 195. Beginning Guitar Class I. 1 Hour

Introduction to playing the guitar with emphasis on chord playing and accompaniment, improvisation, and application of the guitar to music teaching.

## MUS 196. Group Piano I. 1 Hour

For the student with no previous piano study. Rudiments of music reading, performance of simple folk and popular music, basic knowledge of scales, key signatures, and chords. Open to all University students.

## MUS 200. Recital Attendance. 0 Hours

All music majors are required to attend professional and student concerts and recitals, to develop critical listening experience and knowledge of repertoire.

## MUS 201. Music In Concert. 3 Hours

Survey of music literature, styles, and important composers, through preparation for and attendance at selected concerts on the campus and in the community. Concert ticket fees will be required. Open to all University students.

## MUS 202. Professional Development Workshop. 0 Hours

All Bachelor of Music majors are required to attend a weekly professional workshop in their degree area. Course format is didactic and/or experiential according to degree program needs. Course material includes a variety of professional, pedagogical, and technological topics. May be repeated.

## MUS 203. Sights \& Sounds of Music. 3 Hours

An introduction to music and its literature, with emphasis on the way music has been shaped by its cultural, geographic, and historical contexts. Open to all University students.

## MUS 205. Music, Instruments \& Techonology. 3 Hours

Survey of music literature, styles, and important composers, and the way the development of instruments has influenced changes in musical style. The course will also consider the ways technology has altered our approach and access to music making, listening, and dissemination in the twentieth century. Open to all University students.

## MUS 211. Theory of Music III. 2 Hours

Advanced diatonic and chromatic harmonic vocabulary studies and Schenkerian analysis, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 112 with grade of C- or better) or permission of instructor.

## MUS 212. Theory of Music IV. 2 Hours

Music of the twentieth century, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 211 with a grade of $C$ - or better) or permission of instructor.

## MUS 213. Aural Skills III. 2 Hours

Explores more advanced musical hearing and transcription techniques through later harmonic, melodic and rhythmic styles. More advanced melodic, harmonic and rhythmic materials as well as the continuing use of solfege singing to represent students' internalization of melodic structure. Prerequisite(s): (MUS 114 with grade of C- or better) or permission of instructor.

## MUS 214. Aural Skills IV. 2 Hours

Late nineteenth, twentieth and twenty-first century musical structures of harmony, melody, rhythm and compositional development/form explored through listening, transcription and performance. Prerequisite(s): (MUS 213 with a grade of C - or better) or permission of instructor.

## MUS 217. Listening \& Transcription Skills. 2 Hours

Skills in hearing and notating music of representative and diverse styles through use of digital recording, sequencing, and computer notation software. Prerequisite(s): (MUS 112, 114) or permission of instructor.

## MUS 218. Popular Jazz Theory. 2 Hours

Skills in the composition and arranging of popular and jazz styles in music including harmonic progression, melodic forms and the structure of voices and instruments in arrangements. Emphasis on creative applications of technology on the facility of music production. Culminating project is an arrangement, produced and recorded by the student. Prerequisite(s): (MUS 111, 112) or (MUS 115, 116) or permission of instructor.

## MUS 221. Composition II. 1 Hour

Supplemental explorations for majors in music composition, to accompany work in MUS 211-212. Style analysis and synthesis, extension of traditional techniques, and basic instrumental applications. Prerequisite(s): MUS 211 (may be taken as a corequisite).

## MUS 222. Composition II. 1 Hour

Supplemental explorations for majors in music composition, to accompany work in MUS 211-212. Style analysis and synthesis, extension of traditional techniques, and basic instrumental applications. Prerequisite(s): MUS 212, 221, (may be taken as corequisites).

## MUS 223. Introduction to Music Technology. 2 Hours

Provides students with an introduction to the notation and recording of music with a computer. Students will learn to compile and print music, record digital instruments with MIDI, and record and mix music with portable digital audio workstations. Prerequisite(s): (MUS 111, 112) or (MUS 115, 116) or permission of instructor.

## MUS 231. Introduction to Music Education. 2 Hours

An introduction to a wide variety of pedagogical and philosophical aspects of teaching the arts. Topics will include technology, national and state standards, history, and professional organizations. Prerequisite(s): EDT 110.

## MUS 232. Integrating the Arts. 2 Hours

Primarily for Teacher Education majors. Development of knowledge, skills, values, and attitudes in music for integration into a classroom setting in which other classroom subjects are taught. Prerequisite(s): EDT 110.

## MUS 233. Eurhythmics. 1 Hour

Exploration of time, space, and energy through individual and collaborative structured and creative movement for musicianship skill development.

## MUS 235. Voice Pedagogy. 1 Hour

Techniques for teaching singing. Prerequisite(s): Voice major or permission of instructor.
MUS 236. Voice Laboratory. 1 Hour
Introduction to the performance and pedagogical techniques for voice. Prerequisite(s): Instrumental music major or permission of department chairperson.
MUS 237. Brass Instrument Laboratory. 1 Hour
Introduction to the performance and pedagogical techniques for the brass instrument family.
MUS 238. Woodwind Instrument Laboratory. 1 Hour
Introduction to the performance and pedagogical techniques for the woodwind instrument family.

MUS 240. Fundamentals of Conducting. 2 Hours
Introductory-level course discussing basic conducting techniques, musical styles, interpretation, score study and analysis, transposition, and literature. Dual emphasis of choral and instrumental techniques.

## MUS 241. Keyboard Competency I. 0 Hours

Successful mastery of keyboard competency skills required for the first year music major. Prerequisite(s): Permission of department chairperson.

## MUS 242. Keyboard Competency II. 0 Hours

Successful mastery of keyboard competency skills required for the second year music major. Prerequisite(s): MUS 241; permission of department chairperson.

## MUS 250. Second Year Review. 0 Hours

Required mid-point evaluation of all music majors typically completed in the second semester of the second year of study toward the degree. Students must earn a satisfactory grade ( S ) in this course in order to enroll in upper-level coursework in their respective degree programs. Prerequisite(s): Permission of department chairperson.
MUS 280. Music \& Movement for Persons with Disabilities. 1 Hour Training in the use of music and movement for children with disabilities under the supervision of AIM (Adventures in Movement) for the Handicapped, Inc. Includes observations and practices in the field.

## MUS 282. Functional Music Therapy Skills. 2 Hours

Aids music therapy majors in the development of functional competencies on keyboard, guitar, and voice, as well as the ability to learn, memorize, and perform a broad repertoire of American popular song. Prerequisite(s): MUS 112, 114.

## MUS 285. Introduction to Music Therapy. 2 Hours

History and development of music therapy; survey of theoretical bases and current trends for the use of music in therapy; disability areas using music therapy. Orientation in the clinical field. Prerequisite(s): PSY 101.

## MUS 286. Music Therapy Methods. 2 Hours

Introduction to four methods of music therapy: re-creative, receptive, composition, and improvisation. Emphasis on assessment, planning, facilitation, and evaluation of music therapy experiences within each method. Prerequisite(s): MUS 285.

## MUS 287. Practicum in Music Therapy I. 1 Hour

Supervised pre-internship field experiences with children and/or adults with special needs. One-hour weekly lab required. Prerequisite(s): MUS 282; permission of department chairperson.

## MUS 288. Practicum in Music Therapy II. 1 Hour

Supervised pre-internship field experiences with children and/or adults with special needs. One-hour weekly lab required. Prerequisite(s): MUS 250, 287.

## MUS 289. Practicum in Music Therapy III. 1 Hour

Supervised pre-internship field experiences with children and/or adults with special needs. One-hour weekly lab required. Prerequisite(s): MUS 288.

## MUS 290. Music Therapy Treatment Processes. 1 Hour

Addresses the development of established competencies in the areas of music therapy referral, assessment, treatment planning, evaluation, supervision, and documentation of these processes. Prerequisite(s): MUS 285.

MUS 293. Organ Class. 1 Hour
Introduction to the organ, including basic performance techniques, registration, beginning literature, and hymn playing.

## MUS 294. Harpsichord Class. 1 Hour

Beginning course in harpsichord performance, including basic technique, stylistic considerations, and simple maintenance and tuning of the instrument.

## MUS 295. Beginning Guitar Class II. 1 Hour

Note reading in first position; advanced chord work, introduction to chord solo playing, and improvisation. Prerequisite(s): MUS 195 or equivalent.
MUS 296. Functional Keyboard Skills I. 1 Hour
Instruction in development of basic performance technique, sight reading, accompanying, transposing, playing by ear, improvising, and score reading.

## MUS 297. Functional Keyboard Skills II. 1 Hour

Further development of techniques introduced in MUS 296.
Prerequisite(s): MUS 296.
MUS 298. Functional Keyboard Skills III. 1 Hour
Continuation of MUS 297 with emphasis on improvisation and harmonization techniques.
MUS 299. Functional Keyboard Skills IV. 1 Hour
Continuation of MUS 298 with emphasis on advanced chord work and modulation techniques. Prerequisite(s): MUS 298.
MUS 301. Music History \& Literature I. 3 Hours
Survey of Western music history and literature from the Middle Ages to the present. Important composers, masterworks of music literature, compositional styles.

## MUS 302. Music History \& Literature II. 3 Hours

Survey of Western music history and literature from the Middle Ages to the present. Important composers, masterworks of music literature, compositional styles.
MUS 303. Introduction to Music of the World. 3 Hours
Survey of music from representative cultures around the world, and its role and function in society.

## MUS 304. History of American Music. 3 Hours

Survey of the American musical heritage emphasizing Anglo- and AfroAmerican folk traditions, early religious music, country music, pioneers in piano, band and concert music, and contemporary popular music. Open to all University students.

## MUS 305. African-American Sacred Music. 3 Hours

Historical survey of African-American sacred music from its African roots to the present with an emphasis on developments in recent decades. Examines spirituals, the ring-shout, civil rights songs, the various forms of Gospel music, traditional hymnody of the African-American church, and the musical aspects of black preaching. Open to all University students.

## MUS 306. History of American Jazz. 3 Hours

Survey of the literature and performance practices from 1890 to the present. Includes blues, Dixieland, ragtime, boogie-woogie, swing, bop, cool, funky, and current techniques. Open to all University students.
MUS 307. Development of American Popular Song. 3 Hours
Survey of American popular music from the days of the colonies, the war years, the ballad opera, minstrel, vaudeville, operetta, early film music, through Tin Pan Alley to Broadway, including European influences. Open to all University students.

## MUS 308. Chamber Music \& Symphony. 2 Hours

Formal and harmonic analysis of chamber music. Formal analysis of symphonies of classic, romantic, and contemporary composers Prerequisite(s): MUS 211, MUS 212.

MUS 309. Operal History \& Literature. 3 Hours
Survey of the development of the opera and its literature from its seventeenth-century beginnings to the present. Focus upon major works and composers. Open to all University students.

## MUS 310. Mozart's Operas. 3 Hours

An interdisciplinary survey of Mozart's operas - German and Italian, serious and comic. Class discussions will be supplemented by extensive listening and/or viewing of recorded performances and, when possible, attendance at live performances.

## MUS 311. Eighteenth-Century Counterpoint. 2 Hours

Study of the contrapuntal technique of the eighteenth century, particularly in the instrumental works of J.S. Bach. Original compositions in forms of the invention and the fugue. Prerequisite(s): MUS 211, MUS 212.

## MUS 312. Sixteenth-Century Counterpoint. 2 Hours

Study of the medieval modes and the vocal polyphony of the motet and the Mass, up to and including five-part writing; original student compositions.

## MUS 313. Advanced Aural Skills. 2 Hours

Advanced training in dictation, solfege, and aural analysis. Prerequisite(s): MUS 215.

## MUS 314. Score Reading. 2 Hours

Training in reading music at the piano from open score. Drill in transposition, improvisation, and reading of various clefs, leading to the realization of full vocal and orchestral scores.

## MUS 316. Fundamentals of Orchestration. 2 Hours

Instrumentation studies of the four main orchestral families: woodwinds, brass, percussion, strings. Some work in combining families.
Prerequisite(s): MUS 212.

## MUS 318. Fundamentals of Arranging. 2 Hours

Arranging studies for woodwinds, brass, percussion, strings, and choir. Individual examination of instruments; projects. Prerequisite(s): MUS 212.

## MUS 321. Composition III. 2 Hours

Explorations of original composition, which utilize equally the concepts of pitch, temporal elements, timbres, and dynamics. Prerequisite(s): MUS 214, 250.

## MUS 322. Composition III. 2 Hours

Explorations of original composition, which utilize equally the concepts of pitch, temporal elements, timbres, and dynamics. Prerequisite(s): MUS 250, 321.

## MUS 323. Recording Arts \& Digital Media. 3 Hours

Comprehensive overview of digital audio and digital visual media. Skills in recording, archiving, and presenting work. Prerequisite(s): MUS 223 or permission of instructor.

## MUS 325. Beethoven \& His Era. 3 Hours

Survey of the music of Ludwig van Beethoven, including orchestral works and chamber music, opera, keyboard and sacred music; and a survey of the historical context in which Beethoven lived and worked - Europe and the Habsburg Empire of the late eighteenth and early nineteenth centuries, and especially Vienna, the Habsburg capital. Beethoven is the culmination of the High Classic style and also the first of a new generation of Romantic composers.

## MUS 327. Music in Film. 3 Hours

Survey of the styles, aesthetics, and techniques of film music, emphasizing the interaction of music and visual image in film. Consideration of the changes in the evolution of both film and film music, and their relationship to culture and society.

## MUS 328. History of the American Musical. 3 Hours

Survey of the history and literature of the American musical from its nineteenth century predecessors to the present day. The course will focus on major representative works, major composers, and other artistic innovators. Open to all University students.

## MUS 331. Choral Music Methods. 3 Hours

Pedagogical techniques for choral ensembles. Topics include the singing voice, the changing voice, organization, artistic development, literature, and rehearsal techniques. National standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

## MUS 332. Instrumental Music Methods. 3 Hours

Pedagogical techniques for band and orchestra. Topics include teaching and rehearsal techniques, organization, assessment, learning theories, philosophy, literature, and programming. National standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

## MUS 335. Classroom Music Methods. 3 Hours

Pedagogical techniques for classroom music in grades preK through 8. Topics include the pedagogical methods of Orff, Kodaly, Suzuki, and Dalcroze; lesson-plan design, implementation, and assessment. Special emphasis on the exceptional learner. National Standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.
MUS 336. Woodwind Pedagogy. 1 Hour
Course in woodwind pedagogy offered in two semester-long sections: (1) pedagogical techniques for clarinet and flute; (2) pedagogical techniques for saxophone, oboe, and bassoon. Repeatable up to two semester hours.

## MUS 337. Brass Pedagogy. 1 Hour

Course in brass pedagogy offered in two semester-long sections (1) pedagogical techniques for trumpet and horn; (2) pedagogical techniques for trombone, euphonium, and tuba. Repeatable up to two semester hours.

## MUS 338. Percussion Pedagogy. 0.5-1 Hours

Course in percussion pedagogy offered in two semester-long sections:
(1) Pedagogical techniques for the percussion instruments; (2) performance study on snare drum, mallets and timpani; teaching techniques for accessory instruments; minor repairs: method book analysis. Repeatable up to one and a half semester hours.

## MUS 339. String Pedagogy. 1 Hour

Pedagogical techniques for the string instruments. Separate sections for upper strings and lower strings. Each section is a full-term course.
MUS 340. Music Education for Students with Special Needs. 2 Hours Introduction to issues affecting music education with students who have physical, cognitive, emotional, and sensory challenges that affect the learning process. Specific musical characteristics and needs of special learners will be presented along with methods and strategies for teaching. Information and guidelines regarding regulatory issues related to music education will be addressed. Field experience required. Prerequisite(s): MUS 231.

## MUS 345. Choral Conducting. 2 Hours

Continuation of techniques introduced in MUS 240, dealing specifically with techniques for choral ensembles. Prerequisite(s): MUS 240.

MUS 346. Instrumental Conducting. 2 Hours
Continuation of techniques introduced in MUS 240, dealing specifically with techniques for band and orchestra. Prerequisite(s): MUS 240.

## MUS 350. Sacred Music History. 3 Hours

Survey of the development of Christian Music and its function in worship. The focus will be on historical styles, including both their impact on and their application within liturgical settings, as well as on the religious reflections engendered by specific works.

## MUS 351. Church Music Administration. 2 Hours

Examination of the process, organization, administration, planning, and presentation of church music in various Christian traditions. Attention is given to concepts of worship planning, the organization of a comprehensive music program, program development and the relationship between the music ministry and various other church entities.

## MUS 352. Understanding Sacred Music \& Worship in the Local Church. 3 Hours

Focus on the important relationship between music and worship in the life of the church with an emphasis on major contemporary trends in sacred music and work. An historical overview of music and worship with biblical foundations for both are provided. Prerequisite(s): REL 103; (ASI 111, 112).

## MUS 360. Special Topics in Music. 1-3 Hours

Studies in specialized areas of music. May be repeated as topics change, up to six semester hours. Prerequisite(s): Permission of instructor.

MUS 381. Clinical \& Educational Music Improvisation I. 2 Hours Music improvisation techniques and procedures using piano, percussion, voice, guitar, and student's major instrument. Emphasis on the acquisition of clinical and educational music improvisational skills to be applied in the medical, rehabilitation, clinical and/or school music education setting. Prerequisite(s): MUS 212, 214.
MUS 382. Clinical \& Educational Music Improvisation II. 2 Hours Intermediate skill development in clinical and educational music improvisation. Emphasis on assessment, implementation, and evaluation of individual, dyadic, and group improvisatory experiences. Acquisition of expressive movement repertoire to improvised music. Prerequisite(s): MUS 381.

## MUS 385. Music Theraphy Principles. 3 Hours

Principles and processes underlying the applications of music in therapy, including philosophical approaches, assessment procedures, goals and objectives, evaluation and documentation techniques, and professional ethics and standards of clinical practice. Prerequisite(s): MUS 289.

## MUS 386. Music \& Psychotherapy. 3 Hours

Overview of concepts, methods, and materials in the clinical practice of various forms of music psychotherapy. Exploration of the role and function of music within other therapeutic approaches (e.g., cognitive, humanistic, etc.). Identification of factors and issues affecting the helping process.

## MUS 387. Practicum in Music Therapy IV. 2 Hours

Supervised pre-internship experiences with children and/or adults with special needs. One-hour weekly lab required. Corequisite(s): MUS 385.

## MUS 388. Practicum in Music Therapy V. 2 Hours

Supervised pre-internship experiences with children and/or adults with special needs. One-hour weekly lab required. Corequisite(s): MUS 386.

## MUS 390. Ensembles. 0-1 Hours

Various ensembles offered by the Department of Music. See overview page for emsemble titles. Prerequisite(s): Permission of instructor.

## MUS 391. Jazz Improvisation I. 1 Hour

Study and performance of the musical elements that define the various styles of jazz improvisation from the beginning to the intermediate level. Prerequisite(s): MUS 114 or permission of department chairperson.

## MUS 392. Jazz Improvisation II. 1 Hour

Study of the musical elements that define the various styles of jazz improvisation from the intermediate to the advanced level. Prerequisite(s): MUS 391 or permission of department chairperson.

## MUS 396. Jazz Keyboard Harmony I. 1 Hour

Practical and theoretical course of study achieved through in-depth analyses at an introductory level of chords and chord voicings, repertoire, manuscripts, videos and recordings of great jazz pianists. Students identify and perform harmonic techniques of jazz piano used by twentieth century jazz pianists. Prerequisite(s): MUS 297 or permission of department chairperson.

## MUS 397. Jazz Keyboard Harmony II. 1 Hour

Practical and theoretical course of study achieved through in-depth analyses at an intermediate level of chords and chord voicings, repertoire, manuscripts, videos and recordings of great jazz pianists. Students identify and perform harmonic techniques of jazz piano used by twentieth century jazz pianists. Prerequisite(s): MUS 396 or permission of department chairperson.

MUS 398. Instrumental Jazz Improvisation. 1 Hour
Individualized instruction in instrumental jazz improvisation. Study of jazz theory, aural development, stylistic considerations, and repertoire. Prerequisite(s): Participation in Jazz Ensemble and/or Jazz Combo.

## MUS 399. Performance Studies. 1-2 Hours

Private instruction (one thirty to forty-five minute lesson each week) in piano, voice, organ, violin, viola, cello, bass, flute, oboe, clarinet, bassoon, saxophone, trumpet-cornet, French horn, trombone, baritone, tuba, percussion, harp, harpsichord, classical and pick-style guitar, and jazz lessons in piano, guitar, bass, drums, brass, and woodwinds. Prerequisite(s): Permission of instructor.

## MUS 401. Medieval \& Renaissance Music. 1 Hour

The development of music from circa 400 to 1600 , including plainchant, early polyphony, Ars Nova, and Renaissance music; the relationship of music to other arts and to its historical context. Open to all University students.

## MUS 402. Baroque Music. 2 Hours

Literature and performing practices from 1600 to 1750; the relationship of music to social and cultural movements. Open to all University students.

MUS 403. Classic \& Romantic Music. 3 Hours
Literature and performing practices from 1750 to 1900; the relationship of music to social and cultural movements. Open to all University students.

## MUS 404. Twentieth-Century Music. 2 Hours

Study of twentieth-century music, its styles, and its cultural contexts, including post-romantic, impressionistic, neo-classic, and avant-garde. Open to all University students.

## MUS 405. Piano Literature. 2 Hours

Comprehensive survey of literature for the piano. Required of piano performance majors.

## MUS 408. Diction \& Literature for Singers. 2 Hours

Course in foreign language diction with an associated survey of significant and representative works from the vocal solo repertoire. Course alternates its content: German and English; and French and Italian. Course may be repeated as content changes. Prerequisite(s): MUS 399 or 499.

MUS 413. Style \& Design. 2 Hours
Exploration of appropriate analytical techniques as applied to Western music from the Renaissance to the present. Prerequisite(s): MUS 212.

## MUS 414. Sytle \& Design. 2 Hours

Exploration and application of various musical styles as demonstrated by original compositions patterned after selected historic models. Prerequisite(s): MUS 413.

## MUS 416. Advanced Orcestration. 2 Hours

Continuation of MUS 316. Intensive instrumentation studies and detailed analysis of orchestral work. Prerequisite(s): MUS 316.

## MUS 418. Research in Music Theory. 2 Hours

Practical experience in analysis for music composition majors. Prerequisite(s): Senior standing in music.

## MUS 419. Research in Music Theory. 2 Hours

Practical experience in analysis for music composition majors. Prerequisite(s): Senior standing in music.

## MUS 421. Composition IV. 2 Hours

Advanced work in musical composition, writing multi-movement forms of both vocal and instrumental music. Prerequisite(s): MUS 250, 321, 322.

## MUS 422. Composition IV. 2 Hours

Advanced work in musical composition, writing multi-movement forms of both vocal and instrumental music. Prerequisite(s): MUS 250, 321, 322.

## MUS 423. Composition for Large Ensembles. 2 Hours

Preparation and execution of an extended work for large instrumental or vocal ensemble. All aspects of score and part preparation, notation, orchestration, correction, rehearsal, and performance will be considered.

## MUS 424. Advanced Notational Techniques. 2 Hours

Study of special problems in contemporary notation and calligraphy. Work will be done through analysis of twentieth-century techniques and creative solutions to individual problems.

## MUS 425. Electronic Music Composition. 2 Hours

Study of musical electronic techniques, ranging from tape recorders and musique concrete through synthesizer and computer-generated and organized sound.

## MUS 426. Improvisational Music Composition. 2 Hours

Discussion, study, and performance of improvisational musical techniques, including historical overview of classical extemporization, stream of consciousness, jazz, and aleatory and indeterminism.

## MUS 430. Jazz Pedagogy. 2 Hours

Methods and materials for the organization and teaching of jazz performance classes. Topics include teaching improvisation, the rhythm section, and repertoire for the school jazz band. Field experience required. Corequisite(s): Participation in the jazz program.

## MUS 431. Marching Band Pedagogy. 2 Hours

Methods and materials for the organization and teaching of the high school marching band. Topics include teaching and rehearsal techniques, drill design, and philosophy. Field experience required. Corequisite(s): Participation in the marching band.

## MUS 435. Piano Pedagogy. 2 Hours

Systematic preparation for the development of piano technique and tone; survey and study of graded teaching material of grades I and II. Prerequisite(s): Four terms of piano study or equivalent.

MUS 440. Advanced Instrumental Conducting. 2 Hours
Individualized instruction dealing with advanced analysis, interpretation, aural skills, repertoire study, and conducting. Prerequisite(s): MUS 346.

## MUS 450. Degree Recital. 0 Hours

Required performance for all students pursing MUC, MUE, MUP, and MUT majors. In order to successfully complete the degree program, students must earn a satisfactory grade ("S") in this course. Prerequisite(s): MUS 250; permission of department chairperson.

MUS 452. Contemporary Liturgical Music Reperroire. 2 Hours Examination of ways in which contemporary musical resources are utilized in the worship of Christian churches. Choral, congregational, cantoral, and instrumental material will be considered in the context of both the liturgical seasons and specific services. REL 446 recommended.

## MUS 459. Church Music Internship. 2 Hours

Minimum of one semester's supervised service as organist and/or choral director in an approved parish setting. Prerequisite(s): Completion of half of certificate requirements; permission of department chairperson.

## MUS 460. Special Studies in Music. 1-9 Hours

Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to nine semester hours. Prerequisite(s): Senior standing in music or permission of instructor.

MUS 461. Special Topics in Church Music. 1-8 Hours
Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to eight semester hours. Prerequisite(s): Senior standing in music or permission of instructor.

## MUS 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## MUS 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## MUS 480. Capstone Project Seminar. 1 Hour

The first in a sequence of two capstone courses. To be taken in the first semester of the senior year. This course is required for all Bachelor of Arts with a major in Music degrees. Students select a faculty mentor and work with the mentor to establish a capstone project topic, goals, outcomes, and timeline associated with the project. Prerequisite(s): MUS 250; senior standing; MUS major or permission of department chairperson.
MUS 481. Capstone Project \& Presentation. 1 Hour
The second of two capstone courses leading to graduation. To be taken in the second semester of the senior year. Students implement, complete, present, and evaluate a project within their area of concentration, reviewed by faculty and peers. Faculty approval of project and presentation is required for graduation. Prerequisite(s): MUS 480 or permission of department chairperson.

MUS 486. Research in Music Therapy. 2 Hours
Introduction to research methods; review of literature on experimental studies. Research project.

## MUS 489. Music Therapy Internship. 2 Hours

Minimum of 1040 hours supervised clinical training through resident internship in an AMTA-approved program. This requirement precedes the granting of the music therapy degree. Prerequisite(s): Senior standing in music therapy; permission.

## MUS 491. University Orchestra. 1 Hour

Performing ensemble of string, wind, brass, and percussion players; preparing literature for orchestra and chamber orchestra. Open to all University community members by audition.
MUS 492. Symponic Wind Ensemble. 1 Hour
Select band that performs the finest in wind literature. Presents regular concerts during fall and winter terms. Auditions required.
MUS 493. University Chorale. 1 Hour
Mixed vocal ensemble performing music from all style periods in regular concert appearances. Open to all University students. Auditions required.

## MUS 494. Dayton Jazz Ensemble. 1 Hour

Ensemble specializes in the interpretation and performance of traditional and contemporary big band jazz, including the art of improvisation. Audition required.

## MUS 499. Performance Studies. 4 Hours

Private instruction (one-hour lessons weekly) in the same subjects as MUS 399. Prerequisite(s): Permission of instructor.

## Philosophy

Major

- Bachelor of Arts, Philosophy (p. 222)

Minor:

- Philosophy (p. 224)

The objective of the philosophy major program is to provide students with the opportunity to understand contemporary philosophy in view of the history of philosophy. Students majoring in philosophy must successfully complete a minimum of thirty-seven semester hours. The philosophy major program is also offered in India in conjunction with the Marianists. Consult the chairperson of the department for further information.

A minor in philosophy consists of eighteen semester hours.

## Faculty

John Inglis, Chairperson
Professors Emeriti: Kunkel, Quinn, Ulrich, Zembaty
Professors: Benson, DesAutels, Fischer, Fouke, Inglis, Johnson, Kebede, Tibbetts
Associate Professors: Gabbe, Mosser, Payne, Poe, Richards, Whisnant
Assistant Professors: James, McLeod, Paslaru, Velasquez
Lecturers: Bresnahan, Cheung, Lockwood, Marvin

## Bachelor of Arts with a major in Philosophy (phl) Minimum 124 Hours

Common Academic Program (CAP)<br>*credit hours will vary depending on courses selected

First-Year Humanities Commons ${ }^{1}$

| REL 103 | Introduction to Religioius \& Theological Studi |  | $\begin{aligned} & \text { PHL } 440 \\ & \text { (p. 222) } \end{aligned}$ | Advanced Problems |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PHL 103 | Introduction to Philosophy |  |  |  |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  | $\begin{aligned} & \text { PHL } 451 \\ & \text { (p. 222) } \end{aligned}$ | Sem-Individ Phlsphrs |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 | PHL 461 | Sem-Cont Epistemolgy |  |
| ENG 200 | Writing Seminar II |  | (p. 222) |  |  |
| Oral Communication |  | 3 | $\begin{aligned} & \text { PHL } 462 \\ & \text { (p. 222) } \end{aligned}$ | Sem-Contemp Ethics |  |
| CMM 100 | Principles of Oral Communication |  |  |  |  |
| Mathematics |  | 3 | $\begin{aligned} & \text { PHL } 463 \\ & \text { (p. 222) } \end{aligned}$ | Sem-Cont Metaphysics |  |
| Social Science |  | 3 |  |  |  |
| Arts |  | 3 | Select one track from: |  |  |
| Natural Sciences |  | 7 | Ethics and Social Justice |  | 15 |
| Crossing Boundaries |  | variable Select two courses from: |  |  |  |
|  |  | credit | PHL 307 <br> (p. 222) | Philosophy and Women |  |
| Faith Traditions |  |  | (p. 222) |  |  |
| Practical Ethical Action |  |  | $\begin{aligned} & \text { PHL } 310 \\ & \text { (p. 222) } \end{aligned}$ | Social Philosophy |  |
| Inquiry |  |  |  |  |  |
| Integrative |  |  | $\begin{aligned} & \text { PHL } 312 \\ & \text { (p. 222) } \end{aligned}$ | Ethics |  |
| Advanced Study |  | variable <br> credit | PHL 313 <br> (p. 222) | Business Ethics |  |
| Philosophy and/or Religious Studies |  |  |  | Philosophy of Law |  |
| Historical Studies |  |  | (p. 222) |  |  |
| Diversity and Social Justice |  | 3 | PHL 315 | Medical Ethics |  |
| Major Capsto |  | 0-3 | (p. 222) |  |  |
| 1 Completed | ASI 110 and ASI 120. |  | $\begin{aligned} & \text { PHL } 316 \\ & \text { (p. 222) } \end{aligned}$ | Engineering Ethics |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. <br> 3 Completed with ENG 200 H or ASI 120. |  |  | $\begin{aligned} & \text { PHL } 317 \\ & \text { (p. 222) } \end{aligned}$ | Ethics\&Modern War |  |
| Liberal Studies Curriculum |  |  | $\begin{aligned} & \text { PHL } 318 \\ & \text { (p. 222) } \end{aligned}$ | Family Ethics |  |
| Creative and | rming Arts (May include CAP Arts) | 3 | PHL 319 | Information Ethics |  |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 | (p. 222) |  |  |
| Literature (May include CAP Components) |  | 3 | PHL 321 | Environmental Ethics |  |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 | (p. 222) |  |  |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 | PHL 327 | Philosophy of Peace |  |
| Social Sciences (Includes CAP Social Science) |  | 12 | (p. 222) |  |  |
| Major Requirements ${ }^{1,2}$ |  | 37 | $\begin{aligned} & \text { PHL } 328 \\ & \text { (p. 222) } \end{aligned}$ | Phil of Punishment |  |
| PHL 103 <br> (p. 222) | Intro To Philosophy | 3-7 | $\begin{aligned} & \text { PHL } 357 \\ & \text { (p. 222) } \end{aligned}$ | Radical Philosophy |  |
| or ASI 120 <br> (p. 222) | Dev West Global Ctxt |  | $\begin{aligned} & \text { PHL } 358 \\ & \text { (p. 222) } \end{aligned}$ | Marxist Philosophy |  |
| $\begin{aligned} & \text { PHL } 240 \\ & \text { (p. 222) } \end{aligned}$ | Research Meth \& Tech | 1 | $\begin{aligned} & \text { PHL } 364 \\ & \text { (p. 222) } \end{aligned}$ | Race, Gender\&Phl |  |
| PHL 301 <br> (p. 222) | Practical Logic ${ }^{3}$ | 3 | $\begin{aligned} & \text { PHL } 370 \\ & \text { (p. 222) } \end{aligned}$ | Political Philosophy |  |
| or PHL 302 <br> (p. 222) | Symbolic Logic |  | $\begin{aligned} & \text { PHL } 371 \\ & \text { (p. 222) } \end{aligned}$ | Phl \& Human Rights |  |
| PHL 350 <br> (p. 222) | Classical Greek PHL | 3 | $\begin{aligned} & \text { PHL } 372 \\ & \text { (p. 222) } \end{aligned}$ | Values \& Economics |  |
| PHL 352 <br> (p. 222) | Modern Philosophy | 3 | $\begin{aligned} & \text { PHL } 373 \\ & \text { (p. 222) } \end{aligned}$ | Phı\&Cultr Diversty |  |
| PHL 375 <br> (p. 222) | Ethical Theory | 3 | Philosophy electives (9 hours) |  |  |
|  |  |  | History of | ophy | 15 |
| Select two se | ars from: (Satisfies CAP Major Capstone) | 6 | Select two | s from: |  |


| PHL 351 | Medieval Philosophy |
| :--- | :--- |
| (p. 222) |  |
| PHL 353 | Kant\&19th Cent Phl |
| (p. 222) |  |
| PHL 354 | 20th Century Phl |
| (p. 222)  <br> PHL 361 American Philosophy <br> (p. 222)  <br> Philosophy electives (9 hours)  |  |


| Science, Technology, and Values | 15 |
| :--- | :--- |
| PHL 330 | Phl of Science |
| (p. 222) |  |

Select one course from:

| PHL 306 | Phil of Knowledge |
| :--- | :--- |
| (p. 222) |  |
| PHL 315 | Medical Ethics |
| (p. 222) |  |
| PHL 316 | Engineering Ethics |
| (p. 222) |  |
| PHL 319 <br> (p. 222) | Information Ethics |
| PHL 321 | Environmental Ethics |
| (p. 222) |  |
| PHL 331 | Sci, Objtvty \& Values |
| (p. 222) |  |
| PHL 332 | Technology\&Values |
| (p. 222) |  |
| PHL 333 | Phl \& Cognitive Sci |
| (p. 222) |  |
| PHL 334 | Phl of Ecology |
| (p. 222) |  |

Philosophy electives (9 hours)
Religion, Mind, and Metaphysics
PHL 308 Metaphysics
(p. 222)
or PHL 311 Phl of Religion
(p. 222)

Select one course from:

| PHL 309 | Phil of Mind |
| :--- | :--- |
| (p. 222) |  |
| PHL 351 | Medieval Philosophy |
| (p. 222) |  |
| PHL 355 | Asian Philosophy |
| (p. 222) |  |
| PHL 356 Christian Philosophy <br> (p. 222)  <br> PHL 360 Existentialism <br> (p. 222)  <br> PHL 365 Islamic Phl\& Culture <br> (p. 222)  |  |

Philosophy electives (9 hours)
Culture and Human Diversity
Select two courses from:
PHL 307
Philosophy and Women
(p. 222)

PHL 355 Asian Philosophy
(p. 222)

PHL 361 American Philosophy
(p. 222)

PHL 363 African Philosophy
(p. 222)

PHL 364 Race, Gender\&Phl
(p. 222)

PHL 365 Islamic Phl\& Culture
(p. 222)

PHL 373 Phl\&Cultr Diversty
(p. 222)

Philosophy electives (9 hours)
Arts and Human Expression
Select two courses from:

| PHL 320 | Philosophy of Art |
| :--- | :--- |
| (p. 222) |  |
| PHL 323 | Phl \& Literature |
| (p. 222) |  |
| PHL 324 | Philosophy \& Film |
| (p. 222) |  |
| PHL 325 <br> (p. 222) | Philosophy of Music |
| PHL 362 <br> (p. 222) | Phl of Language |

Philosophy electives (9 hours)

## Self-Designed

Philosophy electives (15 hours)

## Breadth

ASI $150 \quad$ Intr to the Univ Exp 1
(p. 222)

Total Hours to total at least 124
1 Includes CAP Components
2 PHL courses are not applicable to CAP Advanced Studies.
3 Students who anticipate graduate work in philosophy are advised to take PHL 302 (p. 222).

## Minor in Philosophy (phl)

Philosophy

| PHL 103 | Intro To Philosophy | 3 |
| :--- | :--- | ---: |
| (p. 222) |  | 3 |
| PHL 301 | Practical Logic |  |
| (p. 222) |  |  |
| or PHL 302 | Symbolic Logic |  |
| (p. 222) |  | 3 |
| Select one course from: |  |  |
| PHL 350 |  | Classical Greek PHL |
| (p. 222) |  |  |
| PHL 351 | Medieval Philosophy |  |
| (p. 222) |  |  |
| PHL 352 | Modern Philosophy |  |
| (p. 222) |  |  |


| PHL 353 Kant\&19th Cent Phl <br> (p. 222)  |  |  |
| :--- | :--- | ---: |
| PHL 354 | 20th Century Phl |  |
| (p. 222) |  | 3 |
| Select one PHL seminar (400 level) | 6 |  |
| Select two PHL courses | 18 |  |

## Courses

## PHL 103. Introduction to Philosophy. 3 Hours

Introduction to philosophical reflection and study of some central philosophical questions in the Western intellectual tradition, including questions of ethics, human knowledge, and metaphysics. Readings from major figures in the history of philosophy such as Plato, Aristotle, Augustine, Aquinas, Descartes, Hume, and Kant.

PHL 240. Research Methodologies \& Technologies. 1 Hour
Development of research skills appropriate for the major. Students submit papers carefully selected from written work required for major classes.
Required for all Philosophy majors. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 301. Practical Logic. 3 Hours

Introduction to the principles of correct reasoning; techniques for the evaluation of arguments; common fallacies in argumentation; applications to current issues in ethics and other areas.

## PHL 302. Symbolic Logic. 3 Hours

Concentrated study of the valid forms of deductive argument and proof in propositional logic and in predicate logic; study of formal systems and of logic and language. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 304. Philosophy of Human Nature. 3 Hours

The nature of human beings; the functions of consciousness, the possibility of freedom, the sources of values, and the goals of human life. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.
PHL 306. Philosophy of Knowledge. 3 Hours
Various criteria, origins, and definitions of knowledge proposed by common sense, science, philosophy, and mysticism; questions of evidence, consistency, and validity pertaining to the problem of truth and belief. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 307. Philosophy \& Women. 3 Hours

Issues and problems related to feminist analysis of society and its ideals, such as equal opportunity, sex roles and gender, reverse discrimination, violence, and language. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 308. Metaphysics. 3 Hours

Issues and problems under such topics as appearance and reality; universals; relations of mind and matter; the nature of persons and personal identity; causality; freedom and determination. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 309. Philosophy of Mind. 3 Hours

An analysis of the concept of mind and related issues such as Descartes' mind-body dualism and various responses; the nature of human agency, self-deception; and the rationality of emotions. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 310. Social Philosophy. 3 Hours

The concepts of liberty, justice, and equality as they relate to social problems such as punishment and rehabilitation, insanity and responsibility, privacy, population regulation, economic injustice, environmental degradation, discrimination, and reverse discrimination. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 311. Philosophy of Religion. 3 Hours

The main issues involved in religious belief and practice, such as the relationship between reason and revelation; critical presentation of views of main writers in the field. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 312. Ethics. 3 Hours

Various types of moral and ethical theory in the Western tradition and major problems such as the extent of human responsibility and the conditions for making ethical judgments. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 313. Business Ethnics. 3 Hours

Review of general ethical theory; ethical assessments of incidents that often occur in commerce affecting employees, employers, consumers, competitors, or the local community. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 314. Philosophy of Law. 3 Hours

Major concepts of law to include the nature of law, legal reasoning, liberty, justice, responsibility, punishment. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 315. Medical Ethics. 3 Hours

Introduction to morality in general and inquiry into the major moral problems of medical practice: human life and the preservation of its integrity. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 316. Engineering Ethics. 3 Hours

Introduction to ethical issues in engineering by developing theories of moral justification and codes of ethics for engineers, and by applying these theories and codes to moral issues in engineering. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 317. Ethics \& Modern War. 3 Hours

Study in applied ethics focusing on the implications of power politics and militarism; various ethical approaches used to evaluate wars,
terrorism and violence; and an overview of some alternatives to war. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 318. Family Ethics. 3 Hours

Introduction to the development of the concept of a family in the tradition of Western philosophy and the philosophic analysis of contemporary ethical problems in marriage and in parenthood. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 319. Information Ethics. 3 Hours

Examination of ethical principles, codes, cases, incidents, and issues in the design, implementation, and use of computerized information systems. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 320. Philosophy of Art. 3 Hours

Theories of art and criteria of evaluation developed by philosophers, artists, and critics; the relationship between art and society and between artistic and other human values. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 321. Environmental Ethics. 3 Hours

Study of the principal ethical perspectives on the treatment of animals and nature including such issues as agriculture, energy, pollution, and economics; assessment of political responses to current environmental problems. Prerequisite(s): PHL103 or ASI 112 or ASI 120.

## PHL 323. Philosophy \& Literature. 3 Hours

Critical examination of philosophical concepts in selected literary masterpieces, ancient and modern. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 324. Philosophy \& Film. 3 Hours

Introduction to philosophical issues and aesthetic theory through a critical reading of texts and examination of selected narrative, documentary, animated, or abstract films. Prerequisite(s): (ASI 111, 112) or PHL 103.

## PHL 325. Philosophy of Music. 3 Hours

Examination of theories on the meaning of music; experiencing music as composer, performer, and listener; aesthetic criteria; moral effect of music. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 327. Philosophy of Peace. 3 Hours

Examination of human violence and ethical justifications for war and exploration of resolutions for human conflict in processes such as pacifism, peacemaking, democratic world governance, nonviolent caring, and a sustainable economy. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 328. Philosophy of Punishment. 3 Hours

Critical examination of punishment, through an analysis of various forms of punishment and what they imply about human nature, power, social norms, and moral principles. Prerequisite(s): ASI 112 or PHL 103.
PHL 330. Philosophy of Science. 3 Hours
Critical examination of the underpinnings of scientific knowledge, and how it differs from other systems of belief and knowledge, through an analysis and evaluation of various scientific concepts such as scientific laws, explanation, observation, and theory, with an exploration of the methods, presuppositions, and biases of scientific knowledge claims. Prerequisite(s): ASI 112 or PHL 103.

## PHL 331. Science, Objectivity \& Values. 3 Hours

Study of three interrelated issues: the limits of scientific methodology; science as a social institution; and science and human values.
Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 332. Technology \& Values. 3 Hours

Study of the social impact of technology-scientists' responsibility; technological change and social change; the 'technological fix'; democracy and the new technological elite; counter-culture critiques of technology. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

PHL 333. Philosophy \& Cognitive Science. 3 Hours
Philosophical introduction to recent research in cognitive psychology, artificial intelligence, and neuroscience regarding human, animal, and machine intelligence; the relation between mind, brain, and personhood; and the biology of conscious states. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 334. Philosophy \& Ecology. 3 Hours

An examination of the epistemological, methodological, ontological, and value issues of ecology, with a focus on how these issues affect the debates in philosophy of science. Prerequisite(s): PHL 103 or ASI 112.

## PHL 340. Special Problems in Philosophy. 1-3 Hours

Examination of perennial and contemporary problems of philosophy. May be repeated when topic changes. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.
PHL 345. Philosophy Scholars' Seminar. 3 Hours
Study and seminar discussion of selected major philosophical works and the analysis, interpretation, and criticism of these works. Open by permission only to students in the Berry Scholars Program. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 350. Classical Greek Philosophy. 3 Hours

The Greek origins of Western scientific, philosophical, and political thought; relationships to current thoughts; ideas of the pre-Socratics, Plato, and Aristotle in their cultural contexts. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 351. Medieval Philosophy. 3 Hours

Major philosophical problems from the fourth through the sixteenth centuries and their importance in shaping current beliefs and traditions in the Augustinian, Jewish, Islamic, Persian, Thomist, and Oxford cultural settings; human action, conscience, freedom, and law. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 352. Modern Philosophy. 3 Hours

Development of philosophy in the seventeenth and eighteenth centuries up to Kant with a focus on several major philosophical figures such as Descartes, Spinoza, Leibniz, Locke, Berkeley, and Hume. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.
PHL 353. Kant \& Nineteenth-Century Philosophy. 3 Hours Development of philosophy beginning with Kant through the nineteenth century including Kant and philosophers such as Fichte, Schelling, Hegel, Schopenhauer, Nietzsche, James, Peirce, and Frege. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 354. Twentieth-Century Philosophy. 3 Hours

Study of some of the major philosophical movements in the twentieth century including phenomenology, existentialism, critical theory (Frankfurt School), hermeneutics, and analytic philosophy. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 355. Asian Philosophy. 3 Hours

Introduction to Asian philosophy through the study of philosophers, texts, philosophical schools and concepts that have their origins in Asia. Comparisons of various Asian philosophies with each other as well as with western traditions. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.
PHL 356. Christian Philosophy. 3 Hours
Major issues such as the relation of faith to reason, the relation of science to faith, and the problem of natural law. Christian considerations of practical philosophy and social theory. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 357. Radical Philosophy. 3 Hours

Study of major attempts to develop a critical understanding of society; analysis of theories such as socialism, anarchism, feminism, critical theory, and critical race theory. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 358. Marxist Philosophy. 3 Hours

Introduction to the thought of Karl Marx through a study of the historical setting of the man and his writings, along with recent interpretations of his thought. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 360. Existentialism. 3 Hours

Major themes in representatives of the existentialist movement, such as human freedom, the absurdity of human existence, the primacy of action, and the roles of speculation and the emotions. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 361. American Philosophy. 3 Hours

Study of the development of American philosophies in the context of historical interactions among Indigenous, European, African, and Asian worldviews in the Americas. Representatives of classical American pragmatism, such as Peirce, James, Dewey, and Addams will be studied in this context. Prerequisite(s): ASI 112 or PHL 103.

PHL 362. Philosophy of Language. 3 Hours
Theories of meaning and reference and their philosophical significance. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 363. African Philosophy. 3 Hours

Introduction to African world views, ethical notions, and social ideas using analytical and comparative approaches; examination of concepts of human diversity and universality; analysis of the transition of traditional African culture to modernity. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 364. Race, Gender \& Philosophy. 3 Hours

Philosophical investigation into the systematic nature of racism and sexism, including inquiry into the epistemological, metaphysical, linguistic, and representational structures that sustain and perpetuate the power dynamics of western post-colonial patriarchial society. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 365. Islamic Philosophy \& Culture. 3 Hours

Examination of selected Islamic thinkers and philosophical traditions, from the period of the Ummayyad Caliphate to the postcolonial era, and their influence on Christian and Jewish thought. Islamic conceptions of law, political society, ethics, hermeneutics, science, revelation, and reality. Special emphasis upon the role of the arts in shaping Islamic philosophy. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 370. Political Philosophy. 3 Hours

Philosophical theories regarding the nature of the state and the legitimization of political authority will be analyzed and evaluated in the context of philosophical conceptions of human nature, liberty, equality, justice, welfare, and power. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 371. Philosophy \& Human Rights. 3 Hours

Examination of the nature and philosophical foundations of universal moral (human) rights; and application of human rights theory to issues and cases involving civil and political rights, and rights to equality, security, subsistence, education, welfare, employment, and health care. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 372. Values \& Economics. 3 Hours

An inquiry into the impact of values and beliefs on the generation of modern economic forces. Analyzing capitalism as a system of validation of beliefs and values, the course relates underdevelopment with the conflict between tradition and modernity. It then reflects on the conditions of change liable to promote global expansion. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 373. Philosophy \& Cultural Diversity. 3 Hours

Philosophical investigation into historical, social, and political dimensions of human diversity in its various manifestations. Topics include colonialism, racism, multiculturalism, nationalism, and democracy.

## PHL 375. Ethical Theory. 3 Hours

An examination of the significant ethical theories offered by historically significant philosophers along with some contemporary critiques of these theories. The theories examined will include virtue, deontological, and utilitarian approaches. Prerequisite(s): ASI 112 or PHL 103.

## PHL 376. Philosophy \& Revolution. 3 Hours

No description available.
PHL 377. Philosophy \& Mass Media. 3 Hours
No description available.
PHL 378. Concept of the Self. 3 Hours
No description available.

PHL 379. Latin America Philosophy. 3 Hours
No description available.
PHL 380. Language \& Our World. 3 Hours
No description available.

## PHL 381. Sexual Ethics. 3 Hours

This course will cover various philosophical issues in sexual ethics, including the following: the proper meaning and role of sex within human life; the existence and content of any "natural law(s)" governing sexual activity; the relations between sex, love, and marriage; the meaning and value of sexual freedom; the moral status of homosexuality and samesex marriage; the meaning and importance of sexual consent; sexual objectification; and the commodification of sex and (mostly) women's bodies in prostitution and pornography. Special attention will be devoted both to Catholic perspectives and to contemporary feminist perspectives on sexual ethics.

PHL 440. Seminar - Advanced Problems in Philosophy. 3 Hours Detailed examination of some of the more technical problems of philosophy as well as those problems that arise in interdisciplinary settings upon which philosophers have brought their technical skills to bear. May be repeated when topic varies. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 451. Seminar - Individual Philosophers. 3 Hours

Detailed examination of the thought of an individual philosopher (e.g., Aquinas, Kant, Rawls, Quine) who is of sufficient importance to warrant special study. May be repeated when topic varies. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.
PHL 461. Seminar - Contemporary Epistemology. 3 Hours Study of recent philosophical work in the theory of knowledge inclusive of scepticism, knowledge and belief, evidence and justification, theories of perception and knowledge, human interests and valuation. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 462. Seminar - Contemporary Ethics. 3 Hours

Study of recent philosophical work in ethics inclusive of an analysis of ethical concepts, theories of normative ethics, theories of human action, and moral justification. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.
PHL 463. Seminar - Contemporary Metaphysics. 3 Hours Study of recent work in metaphysics inclusive of the nature of metaphysics, causality, free will and determinism, personal identity and the theory of mind and body. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

## PHL 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## PHL 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## PHL 490. Directed Readings. 1-4 Hours

Guided independent study primarily for philosophy majors but open to students who have completed twelve semester hours in philosophy. Normally three semester hours but in certain cases the chairperson may approve one, two, or four semester hours. May be repeated when topic changes. Prerequisite(s): (ASI 111, ASI 112) or PHL 103; permission of department chairperson and instructor.
PHL 492. Directed Research. 3 Hours
Faculty-directed research for philosophy majors who have completed all
 write a substantial paper in relation to this research. Prerequisite(s): (ASI 111, ASI 112) or PHL 103; permission of department chairperson and instructor.

## PHL 495. Internship. 1-3 Hours

Supervised practical and professional experience related to philosophy for philosophy majors who have completed prescribed course work. May be repeated to a maximum of three semester hours. Grading Option Two only. Prerequisite(s): ASI 111, ASI 112; PHL 103, PHL 302, PHL 350, PHL 352; one 400-level seminar; permission of department chairperson.

## Physics

- Bachelor of Science, Physical Science (p. 228)
- Bachelor of Science, Physics (p. 229)
- Bachelor of Science, Physics- Computer Science (p. 230)


## Minor

- Physics (p. 231)

The program leading to the Bachelor of Science with a major in physics is designed to provide a strong yet versatile basis for a subsequent scientific career or advanced study. Minimum requirements for all majors are listed below, but students planning for graduate work in physics or an allied area are advised to select additional mathematics and physics courses. A physics major must complete all 300-400-level courses with a 2.0 minimum grade-point average.

Students have the option of adding a multidisciplinary concentration in electro-optics to their physics degree. The concentration is appropriate for physics majors who wish to pursue possible careers in photonics or graduate degrees in the area of optics.

PHY, PSC, and PCS majors are required to attain a grade of C- or better in all physics and math courses that are prerequisite courses for physics courses required of majors.

A minor in physics consists of twelve semester hours.

## Faculty

John Erdei, Chairperson
Distinguished Service Professor: O'Hare
Professors Emeriti: Berney, Graham, Kepes, Miner, Yaney
Professors: Brecha, Elhamri, Evwaraye, Pedrotti, Powers
Associate Professors: Ahouija, Craver, J. Erdei, Smith
Assistant Professor: Agah, Chong, Mathews
Lecturers: Kariyawasam, Song
Lab Instructors: Ballard, L. Erdei, Schaurer

## Bachelor of Science with a major in Physical Science (psc) Minimum 120 Hours

The Physical Science Program is administered by the Department of Physics. It provides a broad training in the physical sciences that is desirable for one who plans to pursue a goal built on a composite science background. The physical science major combines adequate physics, chemistry, geology, and mathematics to provide a sound working knowledge of physical science. Since the program is less specialized than one in a single science, it has provision for adequate course selections and sufficient electives to provide the opportunity for concentrated study in a discipline chosen to meet the career objectives of the individual student.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable <br> credit |
| :--- | ---: |
| Philosophy and/or Religious Studies |  |
| Historical Studies | 3 |
| Diversity and Social Justice | $0-3$ |
| Major Capstone |  |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Major Requirements <br> 54

(Satisfies CAP Natural Science)

| CHM 123 | General Chemistry | 4 |
| :--- | :--- | ---: |
| (p. 228) | and Gen Chemistry Lab |  |
| \& 123L (p. 228) |  |  |
| CHM 124 | General Chemistry | 4 |
| (p. 228) | and Gen Chemistry Lab |  |
| \& 124L (p. 228) |  |  |


| GEO 115 <br> (p. 228) <br> \& 115L (p. 228) | Physical Geology and Physical Geology Lab | 4 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { GEO } 116 \\ & \text { (p. 228) } \\ & \text { \& } 116 \mathrm{~L}(\mathrm{p.} 228) \end{aligned}$ | Geolgcl Hst-Earth and Geolgcl Hst-Earth Lb | 4 |
| $\begin{aligned} & \text { PHY } 206 \\ & \text { (p. 228) } \end{aligned}$ | Gen Physics I Mech | 3 |
| $\begin{aligned} & \text { PHY } 207 \\ & \text { (p. 228) } \end{aligned}$ | Gen Phy II Ele \& Mag | 3 |
| $\begin{aligned} & \text { PHY } 208 \\ & \text { (p. 228) } \end{aligned}$ | Gen Phy III Mec Wavs | 3 |
| PHY 210L <br> (p. 228) | Gen Physics Lab I | 1 |
| PHY 211L <br> (p. 228) | Gen Physics Lab II | 1 |
| $\begin{aligned} & \text { PHY } 480 \\ & \text { (p. 228) } \end{aligned}$ | Capstone (Satisfies CAP Major Capstone) | 1 |
| Physical scien | Ourses (300/400 level) ${ }^{1}$ | 26 |

## Bachelor of Science with a major in Physics (phy) Minimum 120 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variabl credit |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variabl credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies |  |  |
| Diversity and Soci | ial Justice | 3 |
| Major Capstone |  | 0-3 |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Science Breadth Requirements

| CHM 123 <br> (p. 228) <br> \& 123L (p. 228) | General Chemistry and Gen Chemistry Lab (Applies to CAP Natural Science) | 4 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { CHM } 124 \\ & \text { (p. 228) } \\ & \text { \& 124L (p. 228) } \end{aligned}$ | General Chemistry and Gen Chemistry Lab | 4 |
| CPS 132 <br> (p. 228) <br> or CPS 150 <br> (p. 228) | Progrmmng-Engr \& Sci (Applies to CAP Natural Science) <br> Algorthm\&Progrm I | 3 |
| MTH 168 <br> (p. 228) | Anly Geom \& Calc I (Satisfies CAP Mathematics) | 4 |
| MTH 169 <br> (p. 228) | Anly Geom \& Calc II | 4 |
| MTH 218 <br> (p. 228) | Anly Geom \& Calc III | 4 |
| MTH 219 <br> (p. 228) | Appl Diff Equations | 3 |
| MTH 310 <br> (p. 228) | Lin Alg \& Matrices | 3 |

Major Requirements
Select one concentration from:
General Physiscs Concentration 37
PHY 206 Gen Physics I Mech 3
(p. 228)
PHY 207 Gen Phy II Ele \& Mag 3
(p. 228)

PHY 208 Gen Phy III Mec Wavs 3
(p. 228)

PHY 210L Gen Physics Lab I 1
(p. 228)

PHY 211L Gen Physics Lab II 1
(p. 228)

PHY 301 Thermal Physics 3
(p. 228)
PHY 303 Intermediate Mech I 3
(p. 228)
PHY 333 Dig\&Alog Electrncs 3
(p. 228)

PHY 390 Intro Quantum Mech 3
(p. 228)

PHY $408 \quad$ Int Elect \& Magn I 3
(p. 228)

PHY $430 \quad$ Advanced Lab I 2
(p. 228)

PHY 431 Advanced Lab II 2

| PHY 480 <br> (p. 228) | Capstone (Satisfies CAP Major Capstone) | 1 |
| :---: | :---: | :---: |
| PHY electives |  | 6 |
| Physics and Electro-Optics Concentration |  | 43 |
| $\begin{aligned} & \text { ECE } 443 \\ & \text { (p. 228) } \end{aligned}$ | Intro-Electro Optics | 3 |
| $\begin{aligned} & \text { PHY } 206 \\ & \text { (p. 228) } \end{aligned}$ | Gen Physics I Mech (Applies to Cap Natural Science) | 3 |
| $\begin{aligned} & \text { PHY } 207 \\ & \text { (p. 228) } \end{aligned}$ | Gen Phy II Ele \& Mag | 3 |
| $\begin{aligned} & \text { PHY } 208 \\ & \text { (p. 228) } \end{aligned}$ | Gen Phy III Mec Wavs | 3 |
| PHY 210L <br> (p. 228) | Gen Physics Lab I | 1 |
| PHY 211L <br> (p. 228) | Gen Physics Lab II | 1 |
| PHY 301 <br> (p. 228) | Thermal Physics | 3 |
| PHY 303 <br> (p. 228) | Intermediate Mech I | 3 |
| PHY 333 <br> (p. 228) | Dig\&Alog Electrncs | 3 |
| PHY 390 <br> (p. 228) | Intro Quantum Mech | 3 |
| PHY 404 <br> (p. 228) | Physical Optics | 3 |
| PHY 408 <br> (p. 228) | Int Elect \& Magn I | 3 |
| PHY 430 <br> (p. 228) | Advanced Lab I | 2 |
| PHY 431 <br> (p. 228) | Advanced Lab II | 2 |
| $\begin{aligned} & \text { PHY } 480 \\ & \text { (p. 228) } \end{aligned}$ | Capstone (Satisfies CAP Major Capstone) | 1 |
| Select two courses from: |  | 6 |
| $\begin{aligned} & \text { EOP } 501 \\ & \text { (p. 228) } \end{aligned}$ | Geometric Optics |  |
| $\begin{aligned} & \text { EOP } 502 \\ & \text { (p. 228) } \end{aligned}$ | Opticl Radtn\&Matter |  |
| $\begin{aligned} & \text { EOP } 505 \\ & \text { (p. 228) } \end{aligned}$ | Introductn-Lasers |  |
| $\begin{aligned} & \text { EOP } 506 \\ & \text { (p. 228) } \end{aligned}$ | Electro-Optc Dev\&Sys |  |
| $\begin{aligned} & \text { or ECE } 573 \\ & \text { (p. 228) } \end{aligned}$ | Electro-Optcl Dev\&Sys |  |
| $\begin{aligned} & \text { EOP } 514 \\ & \text { (p. 228) } \end{aligned}$ | Guided-Wave Optics |  |
| $\begin{aligned} & \text { or ECE } 574 \\ & \text { (p. 228) } \end{aligned}$ | Guided Wave Optics |  |
| Breadth |  |  |
| ASI 150 <br> (p. 228) | Intr to the Univ Exp | 1 |


| Social Science and Behavioral Science (Includes CAP Social | 6 |
| :--- | :---: |
| Science) |  |
| Total Hours to total at least | 120 |

## Bachelor of Science with a major in Physics-Computer Science (pcs) Minimum 120 Hours

This combined program in physics and computer science leading to the Bachelor of Science with a major in Physics-Computer Science emphasizes the use of computer software in scientific applications and at the same time gives a foundation in the scientific disciplines of physics and computer science. Minimum requirements for the degree are listed below. Students are advised to select additional computer science, mathematics, and physics courses as electives. For further information contact the Physics Department.

## Common Academic Program (CAP)

| *credit hours will vary depending on courses selected |  |
| :--- | :--- |
| First-Year Humanities Commons ${ }^{1}$ | 12 |



| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variable |
| Advanced Study | credit |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3

Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.
Major Requirements 72
(Satisfies CAP Mathematics and CAP Natural Science)
Computer Science ${ }^{1}$
CPS 150 Algorthm\&Progrm I
(p. 228)
(p. 228)

| CPS 151 <br> (p. 228) | Algorthm\&Progrm II |
| :--- | :--- |
| CPS 250 |  |
| (p. 228) | Intro-Comptr Org |
| CPS 346 <br> (p. 228) | Operating Systems I |
| CPS 350 <br> (p. 228) | Data Struct\&Algorthm |
| Three CPS courses (340 level or above) |  |
| Mathematics |  |
| MTH 168 | Anly Geom \& Calc I |
| (p. 228) |  |
| MTH 169 | Anly Geom \& Calc II |
| (p. 228) |  |
| MTH 218 | Anly Geom \& Calc III |
| (p. 228) |  |
| MTH 219 | Appl Diff Equations |
| (p. 228) |  |
| MTH 310 | Lin Alg \& Matrices |
| (p. 228) |  |
| Physics |  |
| PHY 206 | Gen Physics I Mech |
| (p. 228) |  |
| PHY 207 | Gen Phy II Ele \& Mag |
| (p. 228) |  |
| PHY 208 | Gen Phy III Mec Wavs |
| (p. 228) |  |
| PHY 210L | Gen Physics Lab I |
| (p. 228) |  |
| PHY 211L | Gen Physics Lab II |
| (p. 228) |  |
| PHY 323 | Computatnl Physics |
| (p. 228) |  |
| PHY 333 | Dig\&Alog Electrncs |
| (p. 228) |  |
| PHY 480 | Capstone (Satisfies CAP Major Capstone) |
| (p. 228) |  |
| Four PHY courses (300/400 level) |  |

## Minor in Physics (phy)

Physics
Select four PHY courses (300/400 level)
Total Hours
12

## Courses

## PHY 100. Seminar. 0 Hours

Opportunity to become acquainted with the broad spectrum of modern science through periodic meetings with the entire department. Invited speakers, films, student presentations, book reviews, and informal discussions. For all physics, physical science, and physics-computer science majors.
PHY 105. Physical Science - Energy \& the Environment. 3 Hours General introduction to principles of physics including motion, energy, thermodynamics, electricity and magnetism, and nuclear physics. Applications of these principles to non-renewable and renewable energy systems and the climate. Intended for business students.

PHY 108. Physical Science of Light \& Color. 3 Hours
Treatment of physical science with emphasis on light, color, and the interaction of light with materials. For nonscience students.
PHY 108L. Light \& Color Laboratory. 1 Hour
Laboratory experiences to accompany PHY 108. Corequisite(s): PHY 108.

## PHY 201. General Physics. 3 Hours

Topics from mechanics, thermal and mechanical properties of matter, wave motion and sound, and electricity without the formalism of calculus. First term, each year.

PHY 201L. General Physics Laboratory. 1 Hour
Introductory laboratory appropriate for students of the health sciences. Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period each week. First term, each year. Corequisite(s): PHY 201 or PHY 206.

## PHY 202. General Physics. 3 Hours

Continuation of PHY 201 with a treatment of electricity and magnetism, wave motion and properties of light, atomic and nuclear physics. Second term, each year. Prerequisite(s): PHY 201.

## PHY 202L. General Physics Laboratory. 1 Hour

Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period per week. Second term, each year. Prerequisite(s): PHY 201L.

## PHY 203. Modern Technical Physics. 3 Hours

Introduction to selected topics in modern physics without the formalism of calculus. For engineering technology students. Prerequisite(s): College algebra, trigonometry, and introductory statics and dynamics.

## PHY 203L. Technical Physics Laboratory. 1 Hour

Laboratory experiences to accompany PHY 203.
PHY 206. General Physics I - Mechanics. 3 Hours
Introductory course in mechanics for students with a strong background in physics. Three lectures, one recitation each week. Corequisite(s): MTH 148 or MTH 168.

PHY 207. General Physics II - Electricity \& Magnetism. 3 Hours The basic principles of electricity and magnetism. Three lectures, one recitation each week. Prerequisite(s): PHY 201 or PHY 206. Corequisite(s): MTH 149 or MTH 169.
PHY 208. General Physics III - Mechanics of Waves. 3 Hours Introduction to wave phenomena (including sound, light, and matter waves) leading to basic concepts in modern physics. Prerequisite(s): (MTH 149; PHY 202) or (MTH 169; PHY 207).

PHY 210L. General Physics Laboratory. 1 Hour
Introduction to laboratory methods, handling of data, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation each week. Corequisite(s): PHY 206.

## PHY 211L. General Physics Laboratory II. 1 Hour

Laboratory methods, data handling, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation each week. Prerequisite(s): PHY 210L. Corequisite(s): PHY 207.

## PHY 220. Energy \& Environmental Physics. 3 Hours

Introduction to the physical basis of energy systems and the climate. Topics covered will include thermodynamics, planetary radiation balance, heat transfer, basic atmospheric and ocean physics, nuclear energy, renewable energy, modeling of carbon emissions from fossil fuels, simple climate models, monitoring climate change, and mitigation strategies. Prerequisite(s): PHY 206.

## PHY 232. The Physics of Waves. 3 Hours

Physical concept and mathematical relations describing wave phenomena in a variety of physical systems. Topics include oscillation in mechanical and electrical systems, mechanical and electromagnetic waves, geometrical and physical optics and matter waves. Designed for electrical and computer engineering students, but open to all meeting the prerequisites. Prerequisite(s): PHY 206; MTH 169 (may be taken as a corequisite).

## PHY 250. Descriptive Astronomy. 3-4 Hours

Descriptive survey for students who have had little or no previous exposure to astronomy; material from ancient times to present, including pulsars and quasi-stellar objects.

## PHY 295. Research Participation I. 1 Hour

No description available.

## PHY 301. Thermal Physics. 3 Hours

Thermodynamical descriptions of many particle systems obtained from microscopic statistical considerations; laws of thermodynamics, kinetic theory of dilute gases, and Fermi-Dirac and Bose-Einstein statistics. Prerequisite(s): PHY 208 or PHY 232. Corequisite(s): MTH 219.
PHY 303. Intermediate Mechanics I. 3 Hours
The fundamental concepts of mechanics: virtual work, kinematics, special theory of relativity, Lagrange's equation-and central forces, particle dynamics. Prerequisite(s): PHY 208 or PHY 232. Corequisite(s): MTH 219.

## PHY 321. Atomic \& Nuclear Physics. 3 Hours

Concepts and models of the structure of matter; atoms, ions, electrons and nuclei, radioactivity, interactions of radiation with matter, particle detection, accelerators, nuclear models, nuclear reactions and processes, and fundamental particles. Prerequisite(s): (PHY 208 or PHY 232) or permission of instructor.

## PHY 323. Computational Physics. 3 Hours

The course will explore how computers are used in physics. Topics will include simulations of physical systems, numerical analysis, and the use of mathematical analysis packages (MATHCAD, for example.) Programming will be done in True BASIC and MATHCAD. Prerequisite(s): MTH 218; (PHY 208 or PHY 232).
PHY 333. Digital \& Analog Electronics for Scientists. 3 Hours Basic concepts of digital and analog integrated circuit electronics are developed as a way to understand modern microcomputer based instrumentation. A microcomputer based data collection and analysis system is used to study binary data input and output, analog to digital conversion (ADC) devices, digital to analog conversion (DAC) devices, and other digital integrated circuits and concepts. The analog electronics part of the course begins with a study of discrete analog devices and ends with operational amplifiers and their application. Two hours lecture and two hour laboratories each week. Prerequisite(s): (PHY 202L or PHY 211L) or equivalent.
PHY 390. Introduction to Quantum Mechanics. 3 Hours
Basic postulates of quantum mechanics with applications made to atomic physics. Prerequisite(s): MTH 219; (PHY 208 or PHY 232). Corequisite(s): MTH 310.

## PHY 395. Research Participation I. 1-6 Hours

Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors.

## PHY 399. Special Problems in Physics. 1-4 Hours

Special topical courses, laboratory, tutorial, or library work in areas of current interest. Students should consult the composite.

## PHY 403. Intermediate Mechanics II. 3 Hours

Emphasis on solving physical problems; noninertial coordinate systems, rigid body motion, rotating systems, coupled systems, introductory fluid statics and dynamics, normal coordinates, and the descriptions of mechanics appropriate for the transition to wave mechanics. Prerequisite(s): PHY 303.

## PHY 404. Physical Optics. 3 Hours

The electromagnetic wave theory of light, propagation of waves, reflection, refraction, dispersion, polarization, dichroism, birefringence, superposition of waves, interference, diffraction, Fourier optics. Prerequisite(s): MTH 219; (PHY 208 or PHY 232).

## PHY 408. Intermediate Electricity \& Magnetism I. 3 Hours

 Electrostatics, Coulumb's law, Gauss's law, potential, dielectric materials, electrostatic energy, solutions to Laplace's and Poisson's equations, Biot-Savart law, Faraday induction law, magnetization, and Maxwell's equations. Prerequisite(s): MTH 219; (PHY 208 or PHY 232).PHY 409. Intermediate Electricity \& Magnetism II. 3 Hours
Further study of electric and magnetic fields with emphasis on solving problems; Maxwell's equations, propagation of electromagnetic waves, electromagnetic radiation. Prerequisite(s): PHY 408.

## PHY 411. Topics in Modern Physics. 3 Hours

Elements of modern optics, solid state and other selected subjects. Consult chairperson for details. Prerequisite(s): PHY 390 or equivalent.

## PHY 420. Introduction to Solid State. 3 Hours

Classification of solids, crystals and crystal structures, survey of lattice properties, free electron theory, band theory of solids, semi-conductors, and crystal imperfections. Prerequisite(s): MTH 219; (PHY 208 or 232); PHY 390.
PHY 430. Advanced Lab I. 2 Hours
No description available.

## PHY 431. Advanced Lab II. 2 Hours

No description available.

## PHY 440. Quantum Mechanics II. 3 Hours

Study of selected principles in quantum mechanics. Prerequisite(s): PHY 390.

## PHY 450. Senior Project. 3 Hours

The senior project is a capstone experience for senior physics majors. It will consist of a research project of the student's choosing and will require both an oral and written report. The nature and scope of the project will be chosen in consultation with the student's advisor. Permission of the department chairperson is required. Senior physics majors only.

## PHY 460. Seminar. 1 Hour

Presentation of papers by undergraduate students, faculty, and a guest lecturers on topics of concern to the modern physicist. Reviews of books and films appropriate to the group.

## PHY 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## PHY 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.
PHY 480. Capstone Project \& Presentation. 1 Hour
Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

## PHY 495. Research Participation II. 1-6 Hours

Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors.

## PHY 499. Special Problems in Physics. 1-6 Hours

Laboratory, tutorial, or library work in one of such selected topics as solid state physics, polymers, atomic and nuclear physics, modern optics, theoretical physics, surface physics, or general physics. Prerequisite(s): Permission of department chairperson.

## Political Science

Majors:

- Bachelor of Arts, Human Rights Studies (p. 233)
- Bachelor of Arts, Political Science (p. 235)

Minors:

- Human Rights Studies (p. 236)
- Political Science (p. 237)

The Department of Political Science offers the Bachelor of Arts with a major in Political Science and the Bachelor of Arts with a major in Human Rights Studies. Minors in political science and human rights studies are also offered.

- A major in political science requires thirty-nine semester hours of political science courses.
- A major in human rights studies requires forty-five to fifty-seven semester hours of courses in the humanities and the social sciences.
- A minor in political science consists of fifteen semester hours. Courses selected by students should strengthen academic or career objectives.
- A minor in human rights studies consists of eighteen semester hours. Courses selected should strengthen academic or career objectives.


## Minors and Area Concentrations for Majors

A student majoring in political science may elect licensure in education (see EDT) or a minor in any related discipline within the College of Arts and Sciences. The student must consult with the department administering the discipline for the particular requirements of a minor. Students majoring in political science may elect to develop a multidisciplinary concentration in an area of interest including:

- Prelaw
- International affairs
- Public administration and urban affairs
- Political journalism
- Others developed by the student in conjunction with his or her advisor


## Faculty

Jason Pierce, Chairperson
Director of Human Rights Studies Program: Natalie Hudson
Director of Graduate Certificate in Nonprofit \& Community Leadership: Steve Neiheisel
Professors Emeriti: Ahern, Fogel, Inscho, Karns, Kerns, Lapitan, Nelson Professor: Ingram
Associate Professors: Bilocerkowycz, Ensalaco, Ghere, Hudson, Miller, Neeley, Pierce
Assistant Professors: Ambrosius, Budabin, Pautz, Watkins
Lecturers: Birdsong, Neiheisel, Talbott

## Bachelor of Arts with a major in Human Rights Studies STUDIES (hrs) Minimum 124 Hours

The Bachelor of Arts in Human Rights Studies is an integrated preprofessional degree firmly grounded in the traditional liberal arts. Students, faculty, and staff participating in the program enter into it guided by their fundamental commitment to respect and promote the dignity of each human person. The degree is intended to produce intellectually adept students who are capable of performing rigorous research and conducting high quality analysis of critical questions in the area of human rights studies. It is equally intended to produce thoughtful and transformational servant-leaders who will apply the knowledge and skills obtained in the program to contemporary human rights issues and situations both domestically and internationally. Through the integration of liberal and pre-professional education, the interdisciplinary program prepares distinctive graduates who intend to pursue advanced study and training in the field of human rights, or careers in human rights advocacy and humanitarian assistance. Those graduates will possess the values, knowledge and skills necessary for effective public service in:

- Government agencies
- Non-governmental organizations
- International aid agencies
- Non-profit groups in human rights or humanitarian assistance

Courses taken for the major may also count toward completion of the Common Academic Program and the Liberal Studies Curriculum.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$
HST 103 The West \& the World
REL 103 Introduction to Religioius \& Theological Studies

| PHL $103 \quad$ Introduction to Philosophy |  |
| :--- | :--- | :--- |
| ENG $100 \quad$ Writing Seminar I $^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |
| ENG $200 \quad$ Writing Seminar II | 3 |
| Oral Communication |  |
| CMM 100 Principles of Oral Communication | 3 |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 7 |


| Crossing Boundaries | variab <br> credit |
| :--- | :--- |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |


| Advanced Study | variable <br> credit |
| :--- | :--- |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice
Major Capstone

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

| Liberal Studies Curriculum |  |  |
| :---: | :---: | :---: |
| Creative and Performing Arts (May include CAP Arts) |  | 3 |
| L2 Proficiency (Proficiency in a language other than English) ${ }^{1}$ |  | 0-11 |
| Literature (May include CAP Components) |  | 3 |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 |
| Natural Sciences (Satisfies CAP Natural Sciences) |  | 11 |
| Social Sciences (Includes CAP Social Science) |  | 12 |
| Major Requirements ${ }^{2}$ |  | 45 |
| $\begin{aligned} & \text { ASI } 397 \\ & \text { (p. 233) } \end{aligned}$ | Hum Rights Advocacy (Satisfies CAP Major Capstone) | 3 |
| CMM 355 <br> (p. 233) | Rhetoric-Soc Movements | 3 |
| HST 312 <br> (p. 233) | Age-Democratc Revl | 3 |
| $\begin{aligned} & \text { PHL } 371 \\ & \text { (p. 233) } \end{aligned}$ | Phl \& Human Rights | 3 |
| $\begin{aligned} & \text { POL } 305 \\ & \text { (p. 233) } \end{aligned}$ | Intro To Public Adm | 3 |
| $\begin{aligned} & \text { POL } 333 \\ & \text { (p. 233) } \end{aligned}$ | Pol of Human Rghts | 3 |
| $\begin{aligned} & \text { POL } 334 \\ & \text { (p. 233) } \end{aligned}$ | Pol-Human Rights II | 3 |
| $\begin{aligned} & \text { POL } 406 \\ & \text { (p. 233) } \end{aligned}$ | Internatnl Law\&Organ | 3 |
| $\begin{aligned} & \text { REL } 363 \\ & \text { (p. 233) } \end{aligned}$ | Faith \& Justice | 3 |

SOC 371 Soc of Human Rights 3
(p. 233)

Select one course from:
CMM 412 Statistcl Mthd-Comm
(p. 233)

HST 301 Research Seminar
(p. 233)

POL 207 Political Analysis
(p. 233)

SOC 208 Social Resrch Methds
(p. 233)

Select one course from three different concentrations:
Anthropology
ANT 360 Cultures-South Asia
(p. 233)

Criminal Justice Studies
CJS $336 \quad$ Comp Crim Jus Systms
(p. 233)

Economics
ECO 460
(p. 233)

History
HST 334 Hst Pal-Isrl Cflct
(p. 233)

HST 337 Hst Afr-19th Cn-Pr
(p. 233)

HST 356 Women in Third World
(p. 233)

HST 361 US Legl/Const Hst II
(p. 233)

HST 399 Hst Blks-US s/1900
(p. 233)

Philosophy
PHL 314 Philosophy of Law
(p. 233)

PHL 317 Ethics\&Modern War
(p. 233)

PHL 327 Philosophy of Peace
(p. 233)

PHL 370 Political Philosophy
(p. 233)

PHL 372 Values \& Economics
(p. 233)

Political Science
POL $300 \quad$ Political Issues ${ }^{3}$ (p. 233)
POL 319 20th Cent Pol Thgt
(p. 233)

POL 331 NtIsm \& Ethno Poltcs (Satisfies CAP Social
(p. 233) Science)

POL 361 Leadership in NGO
(p. 233)

POL 450 Civil Liberties
(p. 233)

POL 452 Political Violence
(p. 233)

| Religious Studies |  |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { REL } 358 \\ & \text { (p. 233) } \end{aligned}$ | Liberation Theology |  |
| $\begin{aligned} & \text { REL } 360 \\ & \text { (p. 233) } \end{aligned}$ | Christian Ethics |  |
| $\begin{aligned} & \text { REL } 366 \\ & \text { (p. 233) } \end{aligned}$ | The Holocaust |  |
| Sociology |  |  |
| $\begin{aligned} & \text { SOC } 326 \\ & (\mathrm{p} .233) \end{aligned}$ | Law \& Society |  |
| $\begin{aligned} & \text { SOC } 328 \\ & (\mathrm{p.} .233) \end{aligned}$ | Racial\&Eth Minorties |  |
| $\begin{aligned} & \text { SOC } 339 \\ & (\mathrm{p.} \mathrm{233)} \end{aligned}$ | Social Inequality |  |
| $\begin{aligned} & \text { SOC } 345 \\ & \text { (p. 233) } \end{aligned}$ | Soc of Extremism |  |
| $\begin{aligned} & \text { SOC } 368 \\ & \text { (p. 233) } \end{aligned}$ | Immigration |  |
| $\begin{aligned} & \text { SOC } 435 \\ & (\mathrm{p} .233) \end{aligned}$ | Soc of Globalization |  |
| Spanish |  |  |
| $\begin{aligned} & \text { SPN } 380 \\ & \text { (p. 233) } \end{aligned}$ | Spn\&Ibero-Amr Cinema |  |
| $\begin{aligned} & \text { SPN } 480 \\ & \text { (p. 233) } \end{aligned}$ | Spn\&lbero-Amr Cinema |  |
| Experiential or | Research Requirement | 3-6 |
| Select one course from: |  |  |
| $\begin{aligned} & \text { CMM } 390 \\ & \text { (p. 233) } \end{aligned}$ | Independent Study |  |
| HST 496 <br> (p. 233) | Independent Study |  |
| $\begin{aligned} & \text { PHL } 492 \\ & \text { (p. 233) } \end{aligned}$ | Directed Research |  |
| $\begin{aligned} & \text { POL } 431 \\ & \text { (p. 233) } \end{aligned}$ | Independent Study |  |
| $\begin{aligned} & \text { POL } 495 \\ & \text { (p. 233) } \end{aligned}$ | Internship |  |
| $\begin{aligned} & \text { SOC } 409 \\ & (p .233) \end{aligned}$ | Senior Project |  |
| $\begin{aligned} & \text { SOC } 498 \\ & \text { (p. 233) } \end{aligned}$ | Independent Study |  |
| Or complete an Honors Thesis (for a total of 6 semester hours): |  |  |
| $\begin{aligned} & \text { CMM } 477 \\ & \text { (p. 233) } \\ & \& \text { CMM } 478 \\ & \text { (p. } 233 \text { ) } \end{aligned}$ | Honors Thesis and Honors Thesis |  |
| HST 477 <br> (p. 233) <br> \& HST 478 <br> (p. 233) | Honors Thesis and Honors Thesis |  |
| $\begin{aligned} & \text { PHL } 477 \\ & \text { (p. 233) } \\ & \& \text { PHL } 478 \\ & \text { (p. 233) } \end{aligned}$ | Honors Thesis and Honors Thesis |  |


| POL 477 | Honors Thesis |
| :--- | :--- |
| (p. 233) and Honors Thesis <br> \& POL 478  <br> (p. 233)  <br> REL 477 Honors Thesis <br> (p. 233) and Honors Thesis <br> \& REL 478  <br> (p. 233)  <br> SOC 477 Honors Thesis <br> (p. 233) and Honors Thesis <br> $\&$ SOC 478  <br> (p. 233) $\$$. |  |

## Breadth

| ASI 150 | 1 |
| :--- | :--- |
| (p. 233) | Intr to the Univ Exp |
| Total Hours to total at least | 124 |

1 Majors must demonstrate proficiency in a foreign language by passing a University proficiency examination or by completing a language course at the 141 level or higher with a minimum grade of $C$ in one of the following languages:

- Arabic
- French
- German
- Italian
- Mandarin Chinese
- Russian
- Spanish

2 May include CAP Components.
3 This course can only be counted when taught as International Political Economy.

## Bachelor of Arts with a major in Political Science (pol) Minimum 124 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG $200 \quad$ Writing Seminar II
Oral Communication 3
CMM $100 \quad$ Principles of Oral Communication
Mathematics 3

Social Science 3
Arts 3
Natural Sciences 7
$\begin{array}{ll}\text { Crossing Boundaries } & \text { variable } \\ \text { credit }\end{array}$
Faith Traditions
Practical Ethical Action
Inquiry

| Integrative | Minor in Human Rights Studies STUDIES |
| :---: | :---: |
| Advanced Study |  |

The interdisciplinary minor in Human Rights Studies provides students an opportunity to address issues related to human rights from various disciplinary approaches. The universal nature of human rights issues may directly relate to a major, while in other cases this minor will provide an opportunity for broadening one's exposure to these important topics.

The Human Rights Studies minor requires eighteen semester hours. It is recommended that the required course be taken in the sophomore year. Students should consult with the Director of Human Rights Studies to ensure that the courses selected from the elective pool display a significant degree of coherence. Courses taken from this minor may be applied to other minors and to breadth and general education requirements.

| Liberal Studies Curriculum |  |
| :--- | :---: |
| Creative and Performing Arts (May include CAP Arts) | 3 |
| L2 Proficiency (Proficiency in a language other than English) | $0-11$ |

Literature (May include CAP Components) 3

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences, excluding POL courses (Includes CAP Social 12 Science)
Major Requirements 39
POL 200 Intro to Pol Science 3
(p. 233)

POL 201 Amer Political Systems 3
(p. 233)

POL 202 Intro Comp Politics 3
(p. 233)
or POL 214 Intro-Intrntl Poltcs
(p. 233)

POL 207 Political Analysis 3
(p. 233)

POL 316 American Pol Thought 3
(p. 233)
or POL 317 Dev-Political Theory
(p. 233)
or POL 319 20th Cent Pol Thgt
(p. 233)

POL 499 Pol Sci Capstone 3
(p. 233)

Select seven POL courses (May include CAP Components) ${ }^{1,2} 21$
Breadth
ASI $150 \quad$ Intr to the Univ Exp 1
(p. 233)

Total Hours to total at least
1 Including twenty-one semester hours at the 300/400 level.
2 Students earning the B.A. in Political Science may count no more than six semester hours earned on internships (POL 495 (p. 233)) toward the fulfillment of the degree requirements in POL. Students may, however, take additional hours of internship credit (POL 495 (p. 233)) and count them toward the necessary 124 hours needed for graduation.

## Human Rights Studies

| POL 333 | Pol of Human Rghts | 3 |
| :--- | :--- | :---: |
| $(\mathrm{p} .233)$ | Pol-Human Rights II | 3 |
| POL 334 |  |  |
| (p. 233) | 3 |  |


| PHL 371 | Phl \& Human Rights |
| :--- | :--- |
| (p. 233) |  |
| REL 363 | Faith \& Justice |
| (p. 233) |  |
| elect one course from: | 3 |


| ANT 325 | Anth of Human Rights |
| :--- | :--- |
| (p. 233) |  |
| SOC 371 | Soc of Human Rights |
| (p. 233) |  |

Select two courses from: ${ }^{1,2} 6$
ANT 325 Anth of Human Rights
(p. 233)

ANT 360 Cultures-South Asia
(p. 233)

ANT 368 Immigration
(p. 233)

CJS $336 \quad$ Comp Crim Jus Systms
(p. 233)

CMM 355
Rhetoric-Soc Movements
(p. 233)
ECO $460 \quad$ Eco Develop \& Growth
(p. 233)

HST 312 Age-Democratc Revl
(p. 233)

HST 334 Hst Pal-Isrl Cflct
(p. 233)

HST 337 Hst Afr-19th Cn-Pr
(p. 233)

HST 356 Women in Third World
(p. 233)

HST 361 US Legl/Const Hst II
(p. 233)

HST 399 Hst Blks-US s/1900
(p. 233)

| $\begin{aligned} & \text { PHL } 314 \\ & \text { (p. 233) } \end{aligned}$ | Philosophy of Law |
| :---: | :---: |
| $\begin{aligned} & \text { PHL } 317 \\ & \text { (p. 233) } \end{aligned}$ | Ethics\&Modern War |
| $\begin{aligned} & \text { PHL } 327 \\ & \text { (p. 233) } \end{aligned}$ | Philosophy of Peace |
| PHL 370 <br> (p. 233) | Political Philosophy |
| $\begin{aligned} & \text { PHL } 371 \\ & \text { (p. 233) } \end{aligned}$ | Phl \& Human Rights |
| $\begin{aligned} & \text { PHL } 372 \\ & \text { (p. 233) } \end{aligned}$ | Values \& Economics |
| $\begin{aligned} & \text { POL } 300 \\ & \text { (p. 233) } \end{aligned}$ | Political Issues ${ }^{3}$ |
| $\begin{aligned} & \text { POL } 305 \\ & \text { (p. 233) } \end{aligned}$ | Intro To Public Adm |
| $\begin{aligned} & \text { POL } 319 \\ & \text { (p. 233) } \end{aligned}$ | 20th Cent Pol Thgt |
| $\begin{aligned} & \text { POL } 331 \\ & \text { (p. 233) } \end{aligned}$ | Ntlsm \& Ethno Poltcs |
| $\begin{aligned} & \text { POL } 406 \\ & \text { (p. 233) } \end{aligned}$ | Internatnl Law\&Organ |
| $\begin{aligned} & \text { POL } 450 \\ & \text { (p. 233) } \end{aligned}$ | Civil Liberties |
| $\begin{aligned} & \text { POL } 452 \\ & \text { (p. 233) } \end{aligned}$ | Political Violence |
| $\begin{aligned} & \text { REL } 358 \\ & \text { (p. 233) } \end{aligned}$ | Liberation Theology |
| $\begin{aligned} & \text { REL } 360 \\ & \text { (p. 233) } \end{aligned}$ | Christian Ethics |
| $\begin{aligned} & \text { REL } 363 \\ & \text { (p. 233) } \end{aligned}$ | Faith \& Justice |
| $\begin{aligned} & \text { REL } 366 \\ & \text { (p. 233) } \end{aligned}$ | The Holocaust |
| $\begin{aligned} & \text { SOC } 326 \\ & \text { (p. 233) } \end{aligned}$ | Law \& Society |
| $\begin{aligned} & \text { SOC } 328 \\ & \text { (p. 233) } \end{aligned}$ | Racial\&Eth Minorties |
| $\begin{aligned} & \text { SOC } 339 \\ & \text { (p. 233) } \end{aligned}$ | Social Inequality |
| $\begin{aligned} & \text { SOC } 345 \\ & \text { (p. 233) } \end{aligned}$ | Soc of Extremism |
| $\begin{aligned} & \text { SOC } 368 \\ & \text { (p. 233) } \end{aligned}$ | Immigration |
| $\begin{aligned} & \text { SOC } 371 \\ & \text { (p. 233) } \end{aligned}$ | Soc of Human Rights |
| $\begin{aligned} & \text { SOC } 435 \\ & \text { (p. 233) } \end{aligned}$ | Soc of Globalization |

1 At least one course must be from CMM, HST, PHL, or REL.
2 Select any course that has not been already used to fulfill other Human Rights Studies Minor requirements.
3 This course can only be counted when the topic is relevant to human rights.

## Minor in Political Science (pol)

## Political Science

| POL 201 $\quad$ Amer Political Systems | 3 |
| :--- | :--- | :--- |
| $($ p. 233 $)$ |  |
| Select four POL courses $(300 / 400$ level $)$ | 12 |
| Total Hours | 15 |

## Courses

## POL 101. Global Politics. 3 Hours

Examination of major problems and trends in world politics such as ethnic and religious conflict, economic integration and inequality, democratization and security issues, as well as the role of regional and international organizations.

## POL 200. Introduction to Political Science. 3 Hours

Study of the dominant theoretical approaches, central questions and concepts, and history of political science. Political Science majors only.

## POL 201. The American Political System. 3 Hours

Study of the American political system, its attitudinal and constitutional base, its structure and processes.
POL 202. Introduction to Comparative Politics. 3 Hours
Analysis of major concepts and approaches in the study of comparative government and politics.

## POL 207. Political Analysis. 3 Hours

Introduction to the basic concepts and processes of research in political science.

## POL 214. Introduction to International Politics. 3 Hours

Analysis of the dynamic forces of conflict and cooperation in world politics.

## POL 300. Political Issues. 3 Hours

Introductory examination of contemporary political issues selected by the instructor, such topics as welfare, political morality, political campaigns, institutional reform, and political economy.

## POL 301. The American Judicial Process. 3 Hours

Study of the judicial process as part of the political system. Focus on the participants (police, lawyers, judges, interest groups, litigants, jurors) and the process (criminal, civil, and appellate proceedings).

## POL 303. State \& Local Government. 3 Hours

Comparative study of the political institutions, processes, and systems of the fifty states and their effect on the content and administration of selected public policies, programs, and services.

## POL 305. Introduction to Public Administration. 3 Hours

Basic principles of organization and management in executive departments of government at all levels; questions of planning, leadership, and control.

## POL 306. Public Policy Analysis. 3 Hours

Introduction to public policy-making systems and the methodology of policy analysis; theories of policy formulation, the policy-making process, means for measuring policy effectiveness, analysis of proposals for policy change.

## POL 307. The Politics of Bureaucracy \& Regulation. 3 Hours

Examination of the nature and meaning of bureaucracy in contemporary American society, its relationship to the private sector, and the devices for its evaluation and control.

## POL 308. Morality Policy. 3 Hours

Introduction to the morality-based public policy debate with comparison of morality policy (e.g. abortion, drugs, gay rights, pornography) and traditional forms of public policy; study of the moral basis underlying current political topics and debate.

POL 310. Political Parties, Campaigns \& Elections. 3 Hours
Analysis of the history, nature, and function of political parties and their role in the political system in both a domestic and comparative context.

## POL 311. Public Opinion \& Political Behavior. 3 Hours

The formation, maintenance, change, and impact of public opinion on the American political system; the role of theory and analysis of data in understanding public and political behavior.
POL 313. The American Presidency. 3 Hours
Study of the American presidency, the development of presidential powers, and its leadership role in the political system.

## POL 314. Interest Group Politics. 3 Hours

Exploration of the role of interest groups in the American political system through an examination of their internal organization and their roles in the electoral and policy making processes at the national, state and local levels. Prerequisite(s): POL 201.
POL 316. American Political Thought. 3 Hours
An exploration and critical investigation of selected actors, thinkers, texts, ideas and movements in American political thought and theory from the colonial period to the present. Topics may include the founding, the age of Jackson, the Civil War, Progressivism, Women's Suffrage, the New Deal, the Cold War, the Civil Rights Movement, the 1960s, and others.

## POL 317. Development of Political Theory. 3 Hours

Analysis of selected theorists and political doctrines forming the tradition of Western thought on politics. Theorists including Plato, Aristotle, the Stoics, Augustine, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Mill, Marx, Spencer, Lenin, Gasset, and Camus presented in their historical and socio-political contexts.

## POL 318. Public Integrity \& Political Leadership. 3 Hours

Analysis of contemporary leadership issues related to integrity and values in political office-holding, public service, and global governance contexts. Prerequisite(s): CMM 201 or (POL 201 or POL 202 or POL 214) or permission of instructor.

## POL 319. Twentieth-Century Political Thought. 3 Hours

Analysis of selected political theorists, concepts, and movements from the late nineteenth century to the present. Thinkers and concepts may include Marx, Nietzsche, Sarte, Camus, Freud, Arendt, Strauss, the Frankfurt School, Fanon, Foucault, Rawls, Rorty, existentialism, feminism, colonialism, post-modernity, liberalism, neo-conservatism among others.

POL 320. Comparative Politics: Western Europe. 3 Hours
Analysis of governmental institutions and political processes of Western Europe.

POL 321. Comparative Politics: Russia \& the New States. 3 Hours
Analysis of governmental institutions and political processes of Russia and the New States.

POL 323. Comparative Politics: Latin America. 3 Hours
Analysis of governmental institutions and political processes of Latin America.

POL 331. Nationalism \& Ethnopolitics. 3 Hours
An analysis of the politics of nationalism and ethnicity and their impact on social justice. Diverse case studies (US, Russia, Northern Ireland, IsraeliPalestinian) and institutions (European Community, United Nations) will be explored.

## POL 333. Politics of Human Rights. 3 Hours

Examines the evolution of international human rights norms and the creation of the institutions for the protection and promotion of human rights, and case material relating to each category of internationally recognized human rights.

## POL 334. Politics of Human Rights II. 3 Hours

This research seminar examines select topics related to the protection and promotion of human rights. This course is required for all Human Rights Studies majors. The research seminar adopts a case-study approach that enables students to analyze the complex social, economic, cultural, and political factors that impede the full realization of internationally recognized human rights, and to critically evaluate the effectiveness of the advocacy strategies used by inter-governmental human rights bodies and non-governmental human rights organizations. Thus, this seminar is designed to enable students to connect human rights theory and practice. Part I (Overview) provides a more in-depth examination of the material covered in POL 333 (the Politics of Human Rights I). Part II (Case Studies) examines critical contemporary issues and covers the full range of civil, political, economic, social, and cultural rights. Students will collaborate on team research projects and produce a final Human Rights Report containing an analysis of a specific situation of the violation of human rights, findings of fact, and recommendations aimed at rectifying the situation. Students will present and defend their team reports and present in class at the end of the semester. Prerequisite(s): POL 333.

## POL 335. United States National Security Policy. 3 Hours

Analysis of various political, economic, and military issues and problems relating to U.S. national security.

## POL 340. Gender \& International Relations. 3 Hours

An examination of feminist approaches to the study of international politics and the influence of gender roles on notions of international peace, security, power, development, democracy, human rights, transnational advocacy, and conflict resolution. Prerequisite(s): (POL 101 or POL 214) or permission of instructor.
POL 350. Legislative Politics. 3 Hours
Study of the U.S. Congress, its organization and procedures, and its powers and influence in the political system.

## POL 360. Urban Politics \& Policy. 3 Hours

Study of the nature of urban political systems in the U.S. with emphasis on explanation of differences in their policy responses.
POL 361. Leadership in Nongovernmental Organizations. 3 Hours Examines management skills required of professionals in various types of nongovernmental organizations (NGOs) and how leaders integrate agency values and management processes to promote rights-related missions. HRS and POL majors or minors only or permission of the department chairperson.
POL 365. Disaster Policy \& Administration. 3 Hours
Exploration of policy approaches and administrative response strategies related to various phases of disasters and security crises in the U.S. and international settings with attention to human rights issues.
Prerequisite(s): POL 201 or permission of instructor.

## POL 371. Environmental Policy. 3 Hours

Examination of environmental public policymaking and implementation in the U.S. and in the international arena. Analysis of domestic and international government responses to specific environmental issues.

## POL 404. United States - Latin American Relations. 3 Hours

This course examines the foreign relations of the United States with other countries of the Western hemisphere. Political, economic and security issues are examined from both theoretical and historical perspectives. Prerequisite(s): (POL 210 or POL 214) or permission of instructor.

## POL 406. International Law \& Organization. 3 Hours

Study of rules governing the community of nations; their nature, sources, and development; the international agencies responsible for their development, interpretation, and administration. Prerequisite(s): POL 214 or permission of instructor.

## POL 408. American Foreign Policy. 3 Hours

Critical study of the American foreign policy process and evaluation of the sources of American foreign policy. Prerequisite(s): (POL 201, POL 214) or permission of instructor.

## POL 409. Russian Foreign Policy. 3 Hours

Analysis of the internal and external factors shaping the foreign policies of Russia and the independent republics.

## POL 410. Comparative Foreign Policy. 3 Hours

Comparative analysis of the foreign policies of major states with emphasis on the process of policy development and on the national and international determinants of policy behaviors. Prerequisite(s): (POL 202 or POL 217) or permission of instructor.

## POL 411. Constitutional Law. 3 Hours

Analysis of the role of the U.S. Supreme Court in its interpretation of the Constitution. Emphasis on the various methods of judicial interpretation as they affect such provisions as the commerce clause, the taxing and spending powers, due process, the dimensions of presidential and congressional authority, and the doctrine of judicial review. Prerequisite(s): POL 301 or permission of instructor.

## POL 412. Comparative Law. 3 Hours

Explores how foreign judicial systems protect and promote civil and political rights through different constitutional designs. Prerequisite(s): POL 301.

## POL 413. The Politics of Bureaucracy \& Regulation. 3 Hours

Examination of the nature and meaning of bureaucracy in contemporary
American society and the devices for its evaluation and control.

## POL 421. Seminar in Political Science. 3 Hours

Seminar on current problems and issues in political science. May be taken more than once when content changes. Prerequisite(s): Political Science major; completed POL core courses.

## POL 426. Leadership in Building Communities. 3 Hours

Investigation of the processes by which urban neighborhoods develop themselves from the inside out. Students cultivate their own interdisciplinary appreciation of urban communities through extensive interaction with one neighborhood's visioning process. Topics include asset-based community development, social capital, citizenship, adaptive leadership, and community building strategies and tools.
POL 431. Independent Study \& Research. 1-3 Hours
Individual reading and research on selected topics under faculty direction. Recommended for seniors only. Prerequisite(s): Permission of instructor or department chairperson.

## POL 450. Civil Liberities. 3 Hours

Analytical examination of civil liberties in the U.S. with emphasis on the Supreme Court as arbiter in the endless conflict between the demand for individual liberty and the needs of constitutional authority. Prerequisite(s): (POL 301 or POL 411) or permission of instructor.

## POL 452. Political Violence. 3 Hours

Consideration of theoretical approaches to understanding violent change in political institutions; the continuum between violence and nonviolence; revolution, revolt, campus dissent, and political assassination. Prerequisite(s): (POL 202 or POL 333) or permission of instructor.

## POL 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## POL 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## POL 479. Selected Topics in Public Policy. 3 Hours

Intensive examination of policy process, outcomes, and impact in an area or areas of American public policy selected by the instructor; such topics as transportation, education, welfare, national defense, urban and community development, civil rights, and science and technology. May be repeated once when topic changes.

## POL 495. Internship. 1-9 Hours

Supervised experience in government agencies and programs. Prelaw students are assigned to law firms and judicial chambers. Prerequisite(s): Permission of supervising professor.

## POL 497. Service Learning Experience. 1 Hour

Supervised community research or service experience that complements a specific upper division course in Political Science. Repeatable up to three semester hours. No more than three semester hours of Social Science 497 credits can count toward graduation. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 Political Science course.

## POL 499. Political Science Capstone. 3 Hours

Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

## Prelaw

The Prelaw Program, designed to serve students from all areas of the University, provides undergraduates and alumni interested in law school with opportunities to acquire the knowledge and skills necessary for a successful legal career. While students interested in careers in law should choose their undergraduate majors to match their interests and abilities, they should also contact the Prelaw Program as early in their
undergraduate careers as possible so they can receive effective prelaw advice.

The Prelaw Program, with sixteen prelaw faculty advisors, provides students with: curriculum advice designed to help develop skills needed for legal education; with information about the law school admission process; with aid in taking the Law School Admission Test (LSAT) including simulated tests and prep workshops; with opportunities for exploring legal education and legal careers through speakers, panels and other events; and with help in completing law school applications. In addition, the Program supports legal internships in cooperation with Political Science and the Criminal Justice Studies Program, allowing students to gain valuable experience working in a law firm or other lawrelated environment, and sponsors the Prelaw Student Advisory Council, the undergraduate chapter of Phi Alpha Delta, the Prelaw Club and a Mock Trial program in which students compete locally, regionally, and nationally. The Program emphasizes personalized advising based on the individual student's talents, interests, and goals.

For further information concerning the Prelaw Program at the University of Dayton, students should contact the Prelaw Program in Alumni Hall, Room 117; phone (937) 229-4229.

## Prelaw Committee

Laura H. Hume (History), Director
Alakkad (Engineering), Becker (Sociology), Berry (Psychology), Carter (History), Flockerzie (History), Frasca (Economics, Business Administration), Hume (History), Ingram (Political Science),
Kimbrough (English), Payne (Philosophy), Pierce (Political Science), Robinson (Biology), Russo (Education and Allied Professions), Yoder (Communication)

## Courses

## PLW 301. Mock Trial I. 1 Hour

Practice and performance of attorney and witness roles for Mock Trial National Competition case. Repeatable up to four semester hours.

## PLW 302. Mock Trial II. 1 Hour

Practice and performance of attorney and witness roles for Mock Trial Regional and National competitions. Repeatable up to four semester hours. Prerequisite(s): PLW 301; invitation by mock trial coaches.

## Premedicine/Predentistry

Majors:

- Bachelor of Science, Premedicine (p. 242)
- Bachelor of Science, Predentistry (p. 240)

The Bachelor of Science with a major in pre-medicine (MED) or predentistry (DEN) is an interdisciplinary curriculum of study. It is distinctively designed to provide a science-based, diverse education as a preparation for admission to any of the health professional schools including medical, dental, physician assistant, optometry, pharmacy, veterinary, and chiropractic. Courses in biology, chemistry, mathematics, and physics comprise the science core of the major. A substantial complement of humanities and social sciences courses are also required. Within this framework the curriculum is flexible and can be tailored to suit personal interests. During the first two years, students enroll in courses appropriate for entry into professional schools while they also fulfill basic University requirements.

Admission to professional schools depends upon many factors in addition to the curriculum or major. Academic standing, performance on standardized examinations, practical experience relevant to the profession of interest, and adherence to application procedures are all important. The Premedical Programs Office addresses these factors through a comprehensive approach to pre-health care education.

Along with the administration of the DEN and MED majors, the Premedical Programs office acts as the focal point for all matters related to admission to any allied health care professional school. It is an information clearing house, functions as a liaison with professional schools, and coordinates the application process. The Premedical Programs Office also coordinates a number of internships, health related student organizations and community based clinical opportunities for students. Students in any major planning to apply to professional schools are urged to maintain a close relationship with this office.

The University automatically enrolls entering premedical or pre-dental majors into special orientation classes, and identifies them to the Premedical Programs office. Members of the Premedical/Pre-dental Advisory Committee advise these students. However, advising services are available to all pre-professional students regardless of their major. Students in other majors may elect to have committee members serve as their secondary advisors; such students should identify themselves to the Premedical Programs office.

In addition to providing counseling, Premedical Programs offers a seminar series, joint programs with medical schools, grants for health care related experiences, and scholarships. Since admission to professional schools is highly selective, the program monitors the academic progress of MED/DEN majors, and provides feedback at the end of the first and second year. Transfers to other majors, particularly to science majors, can usually be accommodated during the first two years without affecting normal progress towards graduation.

## Premedical/Predental Advisory Committee

Kathleen C. Scheltens, Director
Julie Simon (Mathematics), Assistant Director
Abueida (Mathematics), Ahoujja (Physics), Burky (Biology), Church (Chemistry), Craver (Physics), Hansen (Biology), Johnson (Chemistry), Kango-Singh (Biology), Krane (Biology), Lopper (Chemistry), Mammana (Chemistry), Nickell (Biology), Nielsen (Biology), Rowe (Biology), Smith (Physics), Singh (Biology), S. Swavey (Chemistry), T. Williams (Biology), S. Wright (Biology)

## Bachelor of Science in Predentistry (den) Minimum 120 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$
HST 103 The West \& the World
REL 103 Introduction to Religioius \& Theological Studies
PHL 103 Introduction to Philosophy
ENG 100 Writing Seminar I ${ }^{2}$
Second-Year Writing Seminar ${ }^{3}$
ENG 200 Writing Seminar II
Oral Communication
CMM 100 Principles of Oral Communication
Mathematics


| BIO 462 | Molecular Biology |
| :--- | :--- |
| (p. 240) |  |
| BIO 466 | Bio-Infectious Dis |
| (p. 240) |  |
| BIO 470 | Cancer Biology |
| (p. 240) |  |
| BIO 475 | Human Anatomy |
| (p. 240) | and Human Anatomy Lab |
| \& 475L |  |
| (p. 240) |  |
| BIO 480 | Prin of Microscopy |
| (p. 240) | and Microscopy Lab |
| \& 480L |  |
| (p. 240) |  |
| CHM 201 | Quantitative Anal |
| (p. 240) | and Quant Analysis Lab |
| \& 201L |  |
| (p. 240) |  |
| CHM 302 | Physical Chemistry |
| (p. 240) |  |
| CHM 427 | Medicinal Chemistry |
| (p. 240) |  |
| CHM 451 | Gen Biochemistry I |
| (p. 240) |  |
| CHM 452 | Gen Biochemistry II |
| (p. 240) |  |

## Bachelor of Science in Premedicine (med) Minimum 120 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected

| First-Year Humanities Commons ${ }^{1}$ | 12 |  |
| :--- | :--- | :--- |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I $^{2}$ |  |


| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |
| :--- | :--- |
| ENG $200 \quad$ Writing Seminar II |  |

Oral Communication 3

CMM 100 Principles of Oral Communication

| Mathematics | 3 |
| :--- | :--- |
| Social Science | 3 |

Arts 3
Natural Sciences 7
Crossing Boundaries variable
Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study

Philosophy and/or Religious Studies Historical Studies

Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## Major Requirements

Satisfies CAP Mathematics and Natural Science
BIO 151 Concepts of Bio I 4
(p. 240) and Concepts-Bio Lab I
\& 151L (p. 240)
BIO 152 Concepts of Bio II 4
(p. 240) and Concepts-Bio Lab II
\& 152L (p. 240)
CHM 123 General Chemistry
(p. 240) and Gen Chemistry Lab
\& 123L (p. 240)
CHM 124 General Chemistry
(p. 240) and Gen Chemistry Lab
\& 124L (p. 240)
CHM 313
(p. 240)
\& 313L (p. 240)
CHM $314 \quad$ Organic Chemistry 4
(p. 240) and Organic Chem Lab
\& 314L (p. 240)
CHM 420 Biochemistry 3
(p. 240)

CHM 462L Biochemistry Lab 1
(p. 240)
MTH 148 Introductory Calc I 6
(p. 240) and Introductory Calc II
\& MTH 149
(p. 240)
or MTH 168
(p. 240)
\& MTH 169
(p. 240)

PHY 201 General Physics 6
(p. 240) and General Physics ${ }^{2}$
\& PHY 202
(p. 240)
or PHY 206 Gen Physics I Mech
(p. 240)
\& PHY 207
(p. 240)
\& PHY 208
(p. 240)
PHY 201L General Physics Lab ${ }^{2} \quad 1$
(p. 240)

PHY 202L General Physics Lab 1
(p. 240)

MED $480 \quad$ Pre-Med Capstone (Satisfies CAP Major 1
(p. 240) Capstone)

Select one course from:
3
Organc Chemity

Organic Chemistry 4
and Organic Chemistry Lab

Anly Geom \& Calc I and Anly Geom \& Calc II and Gen Phy II Ele \& Mag and Gen Phy III Mec Wavs

[^4]| MTH 207 <br> (p. 240) | Intro to Statistics |  |
| :---: | :---: | :---: |
| MTH 367 <br> (p. 240) | Statistical Meth I |  |
| Select five science from: ${ }^{3}$ | courses, two with accompanying laboratories, | 17 |
| $\begin{aligned} & \text { BIO } 309 \\ & \text { (p. } 240 \text { ) } \\ & \& 309 \mathrm{~L} \\ & \text { (p. 240) } \end{aligned}$ | Comp Anat Vertebrts and Comp Anatomy Lab |  |
| $\begin{aligned} & \text { BIO } 312 \\ & (\mathrm{p} .240) \\ & \& 312 \mathrm{~L} \\ & (\mathrm{p} .240) \end{aligned}$ | General Genetics and Genetics Lab |  |
| $\begin{aligned} & \text { BIO } 403 \\ & \text { (p. 240) } \\ & \& 403 \mathrm{~L} \\ & \text { (p. 240) } \end{aligned}$ | Physiology I and Physiology Lab |  |
| $\begin{aligned} & \text { BIO } 404 \\ & \text { (p. 240) } \end{aligned}$ | Physiology II |  |
| $\begin{aligned} & \text { BIO } 411 \\ & \text { (p. 240) } \\ & \& 411 \mathrm{~L} \\ & (\mathrm{p} .240) \end{aligned}$ | General Microbiology and Gen Microbiology Lab |  |
| $\begin{aligned} & \text { BIO } 415 \\ & \text { (p. 240) } \end{aligned}$ | Neurobiology |  |
| $\begin{aligned} & \text { BIO } 427 \\ & (\text { p. } 240) \end{aligned}$ | Immunology |  |
| $\begin{aligned} & \text { BIO } 439 \\ & \text { (p. 240) } \end{aligned}$ | Analysis Biol Data |  |
| $\begin{aligned} & \text { BIO } 440 \\ & \text { (p. 240) } \\ & \& 440 \mathrm{~L} \\ & \text { (p. 240) } \end{aligned}$ | Cell Biology and Cell Bio Lab |  |
| $\begin{aligned} & \text { BIO } 442 \\ & \text { (p. 240) } \\ & \& 442 \mathrm{~L} \\ & \text { (p. 240) } \end{aligned}$ | Developmental Bio and Devlpmntl Bio Lab |  |
| $\begin{aligned} & \text { BIO } 445 \\ & \text { (p. 240) } \end{aligned}$ | Evolution\&Devlpmnt |  |
| $\begin{aligned} & \text { BIO } 460 \\ & \text { (p. 240) } \end{aligned}$ | Intro Bioinformatics |  |
| $\begin{aligned} & \text { BIO } 462 \\ & (\text { p. } 240) \end{aligned}$ | Molecular Biology |  |
| $\begin{aligned} & \text { BIO } 466 \\ & \text { (p. 240) } \end{aligned}$ | Bio-Infectious Dis |  |
| $\begin{aligned} & \text { BIO } 470 \\ & \text { (p. 240) } \end{aligned}$ | Cancer Biology |  |
| $\begin{aligned} & \text { BIO } 475 \\ & \text { (p. 240) } \\ & \& 475 L \\ & \text { (p. 240) } \end{aligned}$ | Human Anatomy and Human Anatomy Lab |  |
| $\begin{aligned} & \text { BIO } 480 \\ & \text { (p. 240) } \\ & \& 480 \mathrm{~L} \\ & \text { (p. 240) } \end{aligned}$ | Prin of Microscopy and Microscopy Lab |  |


| CHM 201 | Quantitative Anal |
| :--- | :--- |
| (p. 240) | and Quant Analysis Lab |
| \& 201L |  |
| (p. 240) |  |
| CHM 302 Physical Chemistry <br> (p. 240)  <br> CHM 427 Medicinal Chemistry <br> (p. 240)  <br> CHM 451 Gen Biochemistry I <br> (p. 240)  <br> CHM 452 Gen Biochemistry II <br> (p. 240) $\$$ |  |

## Courses

## MED 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## MED 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## MED 480. Pre-Medicine Capstone. 1 Hour

No description available.

## Psychology

Majors:

- Bachelor of Arts, Psychology (p. 244)
- Bachelor of Science, Psychology (p. 245)

Minor:

- Psychology (p. 245)

Psychology is the scientific study of behavior - how and why we think, feel and act. It is a diverse field that touches all aspects of human endeavor.

The objectives of the Department of Psychology are to provide students with learning experiences in and out of the classroom which will increase their critical thinking skills, facilitate their acquisition of the body of knowledge inherent in the study of human behavior, equip them with its research methodology, and prepare them for employment or graduate school.

The Department of Psychology offers both the Bachelor of Arts and the Bachelor of Science degrees. Each student, in consultation with an advisor, selects a program leading to either a Bachelor of Arts or a Bachelor of Science with appropriate elective credits according to individual interests and goals. The availability of both degrees allows the student to plan a double major or a major in psychology with a strong
concentration of study in a related or complementary discipline. Each psychology major must complete: PSY 101, PSY 216, and PSY 217 early in his or her academic career. The remaining requirements are stated in the two outlines below. Exceptions to these requirements must be approved by the chairperson.

Psychology majors are required to attain grades of C - or better in the following courses:

| PSY 101 | Introductory Psychology | 3 |
| :--- | :--- | :--- |
| PSY 216 | Elementary Statistics | 3 |
| PSY 217 | Experimental Psychology | 3 |

and any two courses from each of the two core groupings:

| PSY 321 | Cognitive Processes | 3 |
| :--- | :--- | :--- |
| PSY 322 | Learning | 3 |
| PSY 323 | Psychology of Perception | 3 |
| PSY 422 | Physiological Psychology | 3 |
| PSY 341 | Social Psychology | 3 |
| PSY 351 | Child Psychology | 3 |
| PSY 361 | Personality | 3 |
| PSY 363 | Abnormal Psychology | 3 |

If a C- or better is not attained, courses will have to be retaken if they are used to satisfy the psychology major.

A minor in psychology consists of eighteen semester hours.

## Faculty

Carolyn Roecker Phelps, Chairperson
Professors Emeriti: Allik, Biers, Butter, DaPolito, Eggemeier, Korte,
Kuntz, Moroney
Professors: Polzella, Reeb
Associate Professors: Bauer, Crutcher, Elvers, Katsuyama, Kirschman, Roecker Phelps, Zois
Assistant Professors: Davis, Dixon, Fuhs, Goodnight, Kunz, Montoya, O'Mara
Visiting Assistant Professor: Berry
Lecturers: Engle, Farnsworth, Layman-Guadalupe, Rodriguez

## Bachelor of Arts with a major in Psychology (psy) MINIMUM 124 HOURS

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |

Arts 3

| Natural Sciences | 7 |
| :--- | :---: |
| Crossing Boundaries | variable |
| credit |  |


| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variable |
| Advanced Study | credit |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies | 3 |
| Diversity and Social Justice | $0-3$ |
| Major Capstone |  |
| 1 | Completed with ASI 110 and ASI 120. |
| 2 | Or ENG 100A and ENG 100B, or ENG 200H, by placement. |
| 3 | Completed with ENG 200H or ASI 120. |

Major Requirements ..... 36
PSY 101 Introductory Psych (Satisfies CAP Social Science) 3
(p. 243)
PSY 216 Elementary Statistic 3
(p. 243)
PSY 217 Expermntl Psychology 3
(p. 243)

Select two courses from:

| PSY 321 | Cognitive Processes |
| :--- | :--- |
| (p. 243) |  |
| PSY 322 | Learning |
| (p. 243) |  |
| PSY 323 | Psy of Perception |
| (p. 243) |  |
| PSY 422 | Physiological Psy |
| (p. 243) |  |

Select two courses from:

| PSY 341 | Social Psychology |
| :--- | :--- |
| (p. 243) |  |
| PSY 351 | Child Psychology |
| (p. 243) |  |
| PSY 361 | Personality |
| (p. 243) |  |
| PSY 363 | Abnormal Psychology |
| (p. 243) |  |

Select one course from: (Satisfies CAP Major Capstone) 3

| PSY 471 Hst of Psychology <br> (p. 243)  |  |
| :--- | :--- |
| PSY 478 | Honors Thesis |
| (p. 243) |  |
| PSY 480 | Senior Seminar |
| (p. 243)  <br> PSY 499 Ind Research Sem <br> (p. 243)  <br> PS courses (300/400 level) ${ }^{2,3}$  |  |

## Bachelor of Science with a major in Psychology (psy) MINIMUM 120 HOURS



| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative | variabl |
| Advanced Study | credit |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Major Requirements 36

PSY 101 Introductory Psych 3
(p. 243)

PSY $216 \quad$ Elementary Statistic 3
(p. 243)

PSY 217 Expermntl Psychology 3
(p. 243)

Select two courses from
PSY 321 Cognitive Processes
(p. 243)

PSY 322 Learning
(p. 243)

PSY 323 Psy of Perception
(p. 243)

PSY $422 \quad$ Physiological Psy
(p. 243)

Select two courses from:
PSY 341 Social Psychology
(p. 243)

| PSY 351 | Child Psychology |
| :--- | :--- |
| (p. 243) |  |
| PSY 361 | Personality |
| (p. 243) |  |
| PSY 363 | Abnormal Psychology |
| (p. 243) |  |

Select one course from: (Satisfies CAP Major Capstone)
PSY $471 \quad$ Hst of Psychology
(p. 243)

PSY $478 \quad$ Honors Thesis
(p. 243)

PSY 480 Senior Seminar
(p. 243)

PSY 499 Ind Research Sem
(p. 243)

PSY courses $\left(300 / 400\right.$ level) ${ }^{3}$

## Minor in Psychology (psy)

Psychology
PSY 101 Introductory Psych 3
(p. 243)

Select one course from: 3

| PSY 321 | Cognitive Processes |
| :--- | :--- |
| (p. 243) |  |
| PSY 322 | Learning |
| (p. 243) |  |
| PSY 323 | Psy of Perception |
| (p. 243)  <br> PSY 422 Physiological Psy <br> (p. 243) $\$$. |  |

Select one course from:
PSY 341 Social Psychology
(p. 243)

PSY $351 \quad$ Child Psychology
(p. 243)

PSY 361 Personality
(p. 243)

PSY 363 Abnormal Psychology
(p. 243)

Select three PSY courses (300/400 level) ${ }^{1}$
Total Hours

1 Only three semester hours of PSY 352 (p. 243), PSY 490 (p. 243), PSY 493 (p. 243), PSY 494 (p. 243), and/or PSY 497
(p. 243) may count toward the minor.

## Courses

## PSY 101. Introductory Psychology. 3 Hours

Study of human behavior including development, motivation, emotion, personality, learning, perception; general application of psychological principles to personal, social, and industrial problems. Students must participate in departmental research.

## PSY 216. Elementary Statistics. 3 Hours

Basic probability and applied statistics: measures of central tendency and dispersion, sampling, estimation, hypothesis testing, tests between means, linear regression, correlation, and ANOVA. Prerequisite(s): MTH 102 or higher; PSY 101.

## PSY 217. Experimental Psychology. 3 Hours

Basic concepts of scientific methods as applied to psychological problems. Experiments to familiarize students with application of scientific methodology to study of human psychological processes. Required of all psychology majors. Prerequisite(s): PSY 101, PSY 216.

## PSY 251. Human Growth \& Development. 3 Hours

Focuses on stages of human development from infancy through the aging adult. Emphasis is on various theoretical approaches and the development associated with each stage. Psychology majors may not take for credit toward major. Prerequisite(s): PSY 101.

## PSY 321. Cognitive Processes. 3 Hours

Information-processing approach to attention, perception, memory, imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experimental processes. Prerequisite(s): PSY 101.

## PSY 321L. Cognitive Processes Laboratory. 1 Hour

In-depth discussion of seminal research in cognition. Collection, analysis, and interpretation of data. Prerequisite(s): (PSY 101, PSY 216, PSY 217, PSY 321) or permission of instructor.

## PSY 322. Learning. 3 Hours

Foundations of the learning process. Classical and instrumental paradigms and variants of each considered in preparation for investigations of complex learning. Prerequisite(s): PSY 101.

## PSY 323. Psychology of Perception. 3 Hours

Introduction to major theoretical and experimental work in perception, including visual, auditory, proprioceptive, and other sensory systems. Prerequisite(s): PSY 101.

## PSY 333. Psychological Tests \& Measurements. 3 Hours

Survey of major tests of intelligence, aptitude, interest, and personality presently used in clinics, schools, personnel offices, and research settings. Emphasis on evaluation and comparison, rationale of construction, ethical considerations. Prerequisite(s): (PSY 101, PSY 216) or equivalent.

## PSY 334. Industrial Psychology. 3 Hours

Introduction to modern efforts to improve human performance in industrial organizations and society; selection and placement of employees, morale, training, and incentives. Prerequisite(s): PSY 101.

## PSY 341. Social Psychology. 3 Hours

Survey of major theoretical and experimental work in the field; attitudes, conformity, emotions, group dynamics.

## PSY 344. Interpersonal Relationships. 3 Hours

Social psychological research in nonverbal behavior, social exchange, self-disclosure, and interpersonal attraction and how these are related to developing relationships. Prerequisite(s): PSY 101.

## PSY 351. Child Psychology. 3 Hours

Study of psychological processes from the developmental point of view; changes in perception, cognition, emotion, and social behavior from infancy to adolescence. Prerequisite(s): PSY 101.

## PSY 352. Field Experience in Child Psychology. 1 Hour

Practical experience with a community agency providing instructional, recreational, or therapeutic services. Volunteer four to five hours weekly. Prerequisite(s): PSY 101; PSY 351 (may be taken as a corequisite).

PSY 353. The Psychology of Adult Development \& Aging. 3 Hours Provides a general introduction to the multi-disciplinary field of adulthood and aging with a specific focus on aspects of interest to psychologists: cognitive, intellectual, personality, and biological changes across adult development. Prerequisite(s): PSY 101.

PSY 355. Developmental Psychopathology. 3 Hours
Survey of developmental theory and research related to the psychopathology of infants, children, and adolescents. Focus is on etiology, identification, and intervention. Prerequisite(s): (PSY 101, PSY 351) or permission of instructor.

## PSY 361. Personality. 3 Hours

Introduction to the study of personality through analysis of such major theories as those of Freud, Skinner, Maslow, and Rogers. The development of personality and the stability of personality characteristics over time. Review of clinical and experimental findings. Prerequisite(s): PSY 101.

## PSY 363. Abnormal Psychology. 3 Hours

Patterns of disordered behavior; social, psychological, and physiological factors; theoretical explanations of abnormal behavior. Prerequisite(s): PSY 101.

## PSY 364. Psychotherapy. 3 Hours

Survey of current types of psychotherapy. Emphasis on similarities and differences in underlying theories of behavioral change and associated techniques. Prerequisite(s): PSY 101.

## PSY 366. Health Psychology. 3 Hours

Explores psychological research, theory, and techniques in healthrelated areas, such as health promotion, the identification of contributors to illness, illness prevention, stress and coping, stress management, changing health beliefs and behavior, pain and its management, and the management of chronic and terminal illnesses.

## PSY 368. Community Psychology. 3 Hours

The application of psychological principles to the understanding and prevention of prevalent community problems including teen pregnancy, school violence, mental illness, substance abuse, homelessness and poverty. Prerequisite(s): PSY 101.

## PSY 375. Psychology of the Arts. 3 Hours

Explores the psychological experiences associated with the creation and appreciation of music, art, and literature. Course content is presented in terms of the theories, methods, and research findings in the fields of perception, cognition, and development.

## PSY 410. Questionnaire Design. 3 Hours

Students will learn about critical issues in questionnaire design and use, the advantages/disadvantages of questionnaires, types of questionnaires, questionnaire development strategies, scale selection, and how to evaluate questionnaires. Students will develop, test and evaluate a questionnaire in a domain of interest to them. Depending on the size of the effort, students may work in teams.

## PSY 422. Physiological Psychology. 3 Hours

Neurophysiological analysis of attention, sensation, perception, emotion, motivation, and learning. Electrophysiological methods are discussed. Prerequisite(s): PSY 101.

## PSY 431. Interviewing \& Counseling. 3 Hours

Integrated approach to the theory, techniques, skills, and values of interviewing and counseling. Practice through written assignments, self study, classroom exercises, and role-playing. Prerequisite(s): PSY 101.

## PSY 435. Human Factors. 3 Hours

Students learn methods to improve the interface between humans and their environment. Human characteristics are studied to determine the best way to design the task, product, workstation, or other environmental features to accommodate the human. Students in the School of Engineering must have junior or senior status.

## PSY 443. Psychology of Women. 3 Hours

Survey of topics related to the psychology of women, such as gender identity and roles, theories of female development, relationships, achievement, language, health issues, spirituality, sexuality, and violence. Prerequisite(s): PSY 101.

## PSY 444. Environmental Psychology. 3 Hours

Study of the effects of the physical and social environment on human behaviors, attitudes, and affective responses. Prerequisite(s): (PSY 101, PSY 341) or permission of instructor.

## PSY 445. Technology, Environment \& Behavior. 3 Hours

Examines the cultural bases for the individual and societal choices which humans make about their use of technology. Technology is broadly defined to include human-machine systems.
PSY 450. Psychology for Ministry. 3 Hours
Human development and adjustment, interpersonal communication, and the psychology of religion. Prerequisite(s): Acceptance into the Lay Ministry Program or permission of instructor.

## PSY 451. Psychology of Religion. 3 Hours

Addresses the psychological study of the nature of religion and religious experience; explores the development of internalized beliefs, attitudes, and values and the effect they have on individual functioning. An introductory course in psychology is highly recommended. Prerequisite(s): Junior or senior standing.
PSY 452. Cognitive Development in Children. 3 Hours
Major approaches to the study of cognitive development; attentional and mediational development in children's learning, memory, and problem solving; language development and Piaget's theory. Prerequisite(s): (PSY 101, PSY 351) or permission of instructor.

## PSY 457. Television \& Its Effects on Children. 3 Hours

Readings in psychological research on the broad effects of television on children. Emphasis on analyzing and evaluating the research. Prerequisite(s): PSY 101.
PSY 461. Current Implications of Drug Dependency. 3 Hours Survey of effects, symptoms, treatment, causalities, and myths associated with drug use and abuse. Emphasis on existing treatment methods and psychological implications of drug dependency. Prerequisite(s): PSY 101.

## PSY 462. Human Sexuality. 3 Hours

Psychological factors in human sexuality including developmental, biological, and social perspectives. Such topics as sexual orientation, gender identity and roles, sexual relationships, sexual dysfunction, power and violence, and commercialization.

## PSY 471. History of Psychology. 3 Hours

The evolution of psychology from its origins in philosophy, science, clinical, and applied settings. Emphasis on integrating these systems and schools of thought with modern psychology. Prerequisite(s): PSY 101 or permission of instructor.

## PSY 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

PSY 478. Honors Thesis Project. 3 Hours
Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## PSY 480. Senior Seminar Capstone. 3 Hours

Seminar project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

## PSY 490. Internship in Psychology. 1-6 Hours

Supervised experience arranged on an individual basis in appropriate settings. For junior or senior psychology majors who have completed prescribed course work only. Consult internship director for details. May be repeated up to six semester hours. Grade Option Two only.

## PSY 493. Independent Study. 1-6 Hours

Problems of special interest investigated under faculty direction. Area and criteria for evaluation to be specified prior to registration. May be repeated up to six semester hours. Prerequisite(s): Permission of instructor.

## PSY 494. Readings in Psychology. 1-6 Hours

Directed reading in a specific area of interest, under faculty supervision. Topic and criteria for evaluation to be specified prior to registration. May be repeated up to six semester hours. Prerequisite(s): Permission of instructor.

## PSY 495. Special Topics in Psychology. 1-3 Hours

Topics of special interest to faculty and students; intensive critical evaluation of appropriate literature. Prerequisite(s): Permission of instructor.

## PSY 497. Service Learning Experience. 1 Hour

Supervised community research or service experience that complements a specific upper division course in Psychology. Repeatable up to three semester hours. Corequisite(s): A 300-400 level Psychology course.

PSY 499. Independent Research Seminar Capstone. 3 Hours Project and presentation of special interest investigated under faculty direction.

## Religious Studies

Major:

- Bachelor of Arts, Religious Studies (p. 248) Minors:
- Religious Studies (p. 249)
- Religious Studies- Catechesis (p. 249)

The Department of Religious Studies sees itself as a community of scholars serving the University community and the local community by teaching, research, criticism, and action. The main concern of the department is an understanding and elucidation of the Judaeo-Christian religious experience as it is exemplified in the Roman Catholic tradition.
This implies not only a deep investigation of the Roman Catholic position but also a dialogue with other Christian traditions and with other world religious.

Students majoring in religious studies ordinarily follow one of five tracks in the major:

- Students preparing for ministry in a Christian church (e.g., pastoral associates, youth ministry, parish religious educators) follow the "Ministry" track.
- Students preparing to teach religion in elementary or secondary schools follow the "Catholic Schools" track.
- Students preparing for graduate study in Christian theology, systematics, church history, ethics, etc., follow the "Graduate School Preparation" track.
- Students preparing for graduate study of religions other than Christianity and/or interested in world religions follow the "World Religions" track.
- Students wishing to study religion as a way of broadening their horizons or who are interested in religious studies as an undergraduate major follow the "General" track.
- All religious studies majors must show basic practical communicative proficiency in one foreign language.

A minor in religious studies consists of eighteen semester hours, which includes REL 103 (or REL 198 or ASI 110). At least three semester hours are to be at the 400 -level.

A minor in Catechesis consists of nineteen semester hours, not including REL 103 (or REL 198 or ASI 110.)

## Faculty

Daniel Speed Thompson, Chairperson
Professors Emeriti: Anderson, Buby, Burns, Friedland, Hater, L'Heureux, Martin, Thimmes
Professors: Barnes, Branick, Miguel Diaz, Doyle, Inglis (Philosophy), Kallenberg, Levering, Miller, Portier, Roberts, Trollinger (History), Zukowski
Associate Professors: Bennett, Bunta, Johnson, Johnston, Moore, Orji, Smith, Thompson, Yocum
Assistant Professors: DeAnda, Kozar, McGrath, Salih
Lecturers: Marian Diaz

## Bachelor of Arts with a major in Religious Studies (rel) Minimum 124 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :--- | :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ | $0-3$ |
| Second-Year Writing Seminar ${ }^{3}$ |  |  |

ENG 200 Writing Seminar II

| Oral Communication | 3 |
| :--- | :---: |
| CMM $100 \quad$ Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable <br> credit |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.
Major Requirements ${ }^{1,2,3} 36$
$\begin{array}{llll}\text { REL } 103 \text { Introduction to Religious and Theological Studies } & 3-7\end{array}$
(p. 247)
or ASI 110 The Roots and Development of Western Culture in a
(p. 247) Global Context

REL 490 Capstone Seminar (Satisfies CAP Major 3
(p. 247) Capstone)

Select one track from:
Ministry
REL 315 The Gospels
(p. 247)

REL 323 Hst-Christianty I
(p. 247)
or REL 324 Hst-Christianty II
(p. 247)

REL 360 Christian Ethics
(p. 247)

REL 437 Significance-Jesus
(p. 247)

REL 440 The Church
(p. 247)

REL 443 The Sacraments
(p. 247)

REL 485 Lay Ministry
(p. 247)

Select one course in each: Old Testament, world religions, religion and culture
Catholic Schools
30
REL 323 Hst-Christianty I
(p. 247)
or REL 324 Hst-Christianty II
(p. 247)

| $\begin{aligned} & \text { REL } 327 \\ & \text { (p. 247) } \end{aligned}$ | US Religious Expr |
| :---: | :---: |
| $\begin{aligned} & \text { or REL } 328 \\ & \text { (p. 247) } \end{aligned}$ | US Cath Experience |
| or REL 329 (p. 247) | African Amer Rel |
| $\begin{aligned} & \text { REL } 360 \\ & \text { (p. 247) } \end{aligned}$ | Christian Ethics |
| REL 383 <br> (p. 247) | Phil of Rel Educ |
| or REL 487 (p. 247) | Rel Ed Thry\&Prac |


| Graduate School Preparation | 30 |
| :--- | :--- |
| REL 323 Hst-Christianty I <br> (p. 247)  <br> REL 324 Hst-Christianty II <br> (p. 247)  <br> REL 437 Significance-Jesus <br> (p. 247)  <br> REL 440 The Church <br> (p. 247)  <br> or REL 443 The Sacraments <br> (p. 247)   |  |

Select one course in each: Old Testament, New Testament, ethics, world religions, religion and culture, systematic theology
World Religions 30

REL 323 Hst-Christianty I
(p. 247)
or REL 324 Hst-Christianty II
(p. 247)

Select three courses from:
REL 304 Hinduism
(p. 247)

REL 305 Eastern Orthodoxy
(p. 247)

REL 306 Buddhism
(p. 247)

REL 307 Judaism
(p. 247)

REL 308 Islam
(p. 247)

Select one course in each: Old Testament, New Testament, ethics, systematic theology, religion and culture
REL elective
General
30
Select one course in each: Old Testament, New Testament, world religions, church history, systematic theology, ethics, religion and culture
REL elective

## Minor in Religious Studies (rel)

Religious Studies
Select eighteen REL semester hours ${ }^{1} 18$
Total Hours

1 At least three semester hours at the 400 level.

## Minor in Religious Studies-Catechesis (Cte)

The Minor in Religious Studies - Catechesis (CTE) offers students an excellent opportunity to prepare to teach religion (catechesis) in Catholic schools, or parish ministry today. The minor is grounded in the official principles of catechesis required by the United States Conference of Catholic Bishops. The minor incorporates the basic courses required by most dioceses across the country for achieving diocesan certification in content, methodology and praxis experiences. It is open to all students who desire to engage in a religion teaching ministry either on a full-time professional or a volunteer basis following graduation.

| Religious Studies - Catechesis ${ }^{1}$ |  |  |
| :---: | :---: | :---: |
| REL 328 <br> (p. 247) | US Cath Experience ${ }^{2}$ | 3 |
| Forum for Young Catechetical Leaders |  | 4 |
| $\begin{aligned} & \text { REL } 281 \\ & \text { (p. 247) } \end{aligned}$ | Forum Cat Lead I |  |
| $\begin{aligned} & \text { REL } 282 \\ & \text { (p. 247) } \end{aligned}$ | Forum Cat Lead II |  |
| $\begin{aligned} & \text { REL } 283 \\ & \text { (p. 247) } \end{aligned}$ | Forum Cat Lead III |  |
| $\begin{aligned} & \text { REL } 284 \\ & \text { (p. 247) } \end{aligned}$ | Forum Cat Lead IV |  |
| Select one Liturgy course from: |  | 3 |
| $\begin{aligned} & \text { REL } 356 \\ & \text { (p. 247) } \end{aligned}$ | Chr Tradition-Prayer |  |
| $\begin{aligned} & \text { REL } 383 \\ & \text { (p. 247) } \end{aligned}$ | Phil of Rel Educ |  |
| $\begin{aligned} & \text { REL } 443 \\ & \text { (p. 247) } \end{aligned}$ | The Sacraments |  |
| $\begin{aligned} & \text { REL } 446 \\ & \text { (p. 247) } \end{aligned}$ | Chrstn Liturgy |  |
| $\begin{aligned} & \text { REL } 488 \\ & \text { (p. 247) } \end{aligned}$ | Spiritualty\&Rel Educ |  |
| Select one Scripture course from: |  | 3 |
| $\begin{aligned} & \text { REL } 310 \\ & \text { (p. 247) } \end{aligned}$ | The Pentateuch |  |
| $\begin{aligned} & \text { REL } 311 \\ & (\text { p. 247) } \end{aligned}$ | The Prophets |  |
| $\begin{aligned} & \text { REL } 315 \\ & \text { (p. 247) } \end{aligned}$ | The Gospels |  |
| $\begin{aligned} & \text { REL } 318 \\ & \text { (p. 247) } \end{aligned}$ | Studies in Paul |  |

Select one Morality or Ethics course from: 3
REL $360 \quad$ Christian Ethics
(p. 247)
(p. 247)

| $\begin{aligned} & \text { REL } 363 \\ & \text { (p. 247) } \end{aligned}$ | Faith \& Justice |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { REL } 364 \\ & \text { (p. 247) } \end{aligned}$ | Current Moral Issues |  |
| Select one Ecclesiology or Church History course from: |  | 3 |
| $\begin{aligned} & \text { REL } 323 \\ & \text { (p. 247) } \end{aligned}$ | Hst-Christianty I |  |
| $\begin{aligned} & \text { REL } 324 \\ & \text { (p. 247) } \end{aligned}$ | Hst-Christianty II |  |
| $\begin{aligned} & \text { REL } 440 \\ & \text { (p. 247) } \end{aligned}$ | The Church |  |
| Total Hours |  | 19 |

1 These hours are in addition to REL 103 (p. 247) (or REL 198 (p. 247) or ASI 110), which is usually taken in the student's first year.
2 Or equivalent.

## Courses

REL 103. Introduction to Religioius \& Theological Studies. 3 Hours Examination of the nature of religion, comparative aspect of religion, and the function of religion as a source of interpretation of life. The 'Catholic Option' takes the majority of its perspectives and examples about religious beliefs and practices from the Roman Catholic tradition. The 'Scripture Option' takes the majority of its perspectives and examples about religious beliefs and practices from scriptural traditions.

## REL 198. Religioius Studies Scholars' Seminar. 3 Hours

Study and seminar discussion of major types of religions in history and some of their practices, values, beliefs, historical development, and theological reflection, including Catholic tradition; review of major theories on the nature, origin, and function of religion in human life. Open by permission only to first-year students in the Berry Scholars Program.

## REL 210. Introduction to Scripture. 1 Hour

An introductory overview of Christian scripture that is foundational for Old and New Testament online courses.

## REL 211. Introduction to the Old Testament. 1 Hour

Study of contemporary Old Testament studies to learn how to read a biblical text in terms of its literary qualities and cultural influences on interpretations.

## REL 212. Introduction to the New Testament. 1 Hour

Introduction to the New Testament with a focus on the text's cultural contexts, literary composition, theological themes, and pastoral applications.

## REL 260A. Catholic Social Teaching I. 1 Hour

The first of two courses that provide background on Catholic social teaching as articulated in the Catechism of the Catholic Church and Episcopal documents.

## REL 260B. Catholc Social Teaching II. 1 Hour

The second of two courses that provide background on Catholic social teaching as articulated in the Catechism of the Catholic Church and Episcopal documents. Prerequisite(s): REL 260A.

## REL 281. Forum for Catechetical Leaders I. 1 Hour

Study of key themes of The National Directory for Catechesis regarding 'The Tasks of Catechesis and Faith Formation'. Themes include (a) Introduction to the Catechetical Ministry of the Church, (b) The Vocation of the Catechist, (c) Faith Formation, and (d) Fundamentals for Designing Catechetical Plans. Prerequisite(s): ASI 111 or REL 103.

REL 282. Forum for Catechetical Leaders II. 1 Hour
Study of key themes of The National Directory for Catechesis regarding 'The Art of Communicating Faith: Scripture and Tradition'. Themes include (a) Effective Catechesis, (b) Four Pillars of Our Catholic Faith, (c) Integrating Scripture in Catechetical Ministry, and (d) Integrating Liturgy and Liturgical Experiences in Catechetical Ministry. Prerequisite(s): ASI 111 or REL 103.

## REL 283. Forum for Catechetical Leaders III. 1 Hour

Study of key themes of The National Directory for Catechesis regarding: 'Liturgy, Popular Devotions, Literature and the Religious Imagination. Themes include (a) Storytelling, (b) Popular Devotions and Faith Experiences, (c) Role of Mary in Catechesis, and (d) Diverse Religious Traditions and the Quest for God. Prerequisite(s): ASI 111 or REL 103.

## REL 284. Forum for Catechetical Leaders IV. 1 Hour

Study of key themes of The National Directory for Catechesis regarding: 'Discipleship (Catholic Moral Life), Catholic Social Teachings and Catechetical Planning'. Themes include (a) Developing a Pastoral Catechetical Plan, (b) Call and Challenge of Discipleship, (c) Catholic Social Teachings, and (d) Communications Technology and Catechesis. Prerequisite(s): ASI 111 or REL 103.

## REL 304. Hinduism. 3 Hours

Study of the world's oldest living religion. Examines the historical development of major Hindu teachings, texts, practices and paths from ancient times to present, including forms of Hinduism taking root in the West today. Prerequisite(s): (ASI 110, ASI 120 or equivalent) or (REL 103 or 198).

## REL 305. Eastern Orthodoxy. 3 Hours

Exploration of the history and theology of the Eastern Orthodox Church, from the Apostles to Byzantium to Russia and the United States. Prerequisite(s): (ASI 110, ASI 120 or equivalent) or (REL 103 or REL 198).

## REL 306. Buddhism. 3 Hours

Exploration of the 2,500-year-old Buddhist tradition - the life of its founder, development of its teachings, rituals, and meditation techniques. Survey of the spread of Buddhism to the West in the twentieth century. Parallels and contrasts with the Christian tradition. Prerequisite(s): (ASI 110, ASI 120 or equivalent) or (REL 103 or REL 198).

## REL 307. Judaism. 3 Hours

Basic introduction to Judaism: its history, its faith, its worship. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 308. Islam. 3 Hours

Exploration of the Islamic religious traditions: the life of Islam's founder, the development of its teaching and ritual, its spread from North Africa into Europe, Asia, Oceania, its influence on culture and its contemporary resurgence. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 309. Afro-Latin Religions. 3 Hours

The study of Voudou, Santeria and other religions which arose when the religious traditions of West Africa were transplanted to the Americas and the Caribbean where practitioners encountered Christianity.
These religions' historical and contemporary forms as well as issues of syncretism and church-state relations are considered. Prerequisite(s): ASI 110 or (REL 103 or REL 198).

## REL 310. The Pentateuch. 3 Hours

Examination of the first five books of the Hebrew Bible, known as the Torah or Pentateuch, emphasizing the traditions that relate primeval beginnings, ancestral history, the exodus, wilderness wanderings, and the legal codes. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 311. The Prophets. 3 Hours

The prophetic texts of the Old Testament studied as reformulations of ancient religious traditions to meet new historical situations. The relevance of the prophets to contemporary life and throughout. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 312. The Psalms \& the Wisdeom Literature. 3 Hours

Critical examination of the biblical books of Psalms, Proverbs, Job, Ecclesiastes, and Ben Sira and of related literature within the historical context in which they arose. The contemporary relevance of this literature. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 315. The Gospels. 3 Hours

With the Gospel of Mark as a point of departure, comparison of the Markan, Matthean, and Lukan narratives for an understanding of the various conceptions of Jesus found in these Gospels. The course includes historical-critical study of the Gospel to John, its text, literary techniques, structure and theology. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 316. New Testament Theologies. 3 Hours

Survey of New Testament writings with a focus on the religious ideas specific to each; special attention to authors' christology, eschatology, and soteriology; exploration of relevance of the New Testament message to Christian faith today. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 318. Studies in Paul. 3 Hours

Detailed examination of the letters of Paul, stressing the historical circumstances affecting their composition as well as the main religious ideas of Paul that govern their content. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 319. The Book of Revelation. 3 Hours

Detailed critical analysis of various biblical apocalyptic texts as found in Judaism and early Christianity. Focus on the Book of Revelation against the background of other biblical and intertestamental apocalyptic texts. Prerequisite(s): (ASI 111, ASI 112 or equivalent) or (REL 103 or REL 198).

## REL 323. History of Christianity I. 3 Hours

Study of important events movements, ideas, and people in the development of Christianity to the year 1100 including the formation of the Canon, early Church councils, Augustine, Gregory the Great, monasticism, the rise of Islam, Eucharistic and other controversies, and the Gregorian Reform. Prerequisite(s): (ASI 111, ASI 112 or equivalent) or (REL 103 or REL 198).

## REL 324. History of Christianity II. 3 Hours

Study of important events, movements, ideas, and people in the development of Christianity from 1100 to the present, including the separation of the Churches of the East and West, rise of the mendicant orders, Scholasticism, key themes and figures of the Reformation, Vatican I, Modernist crisis, ecumenism, and Vatican II. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 326. Protestant Christianity. 3 Hours

Survey of the development of Protestant thought from the Reformation. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 327. United States Religious Experience. 3 Hours

Study of a variety of religious traditions in their engagement with and influence within the U.S. social and cultural context including the effects of pluralism, religious liberty, secularization, and consumer capitalism. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 328. United States Catholic Experience. 3 Hours

The growth and development of Catholic christianity in the U.S.; its interaction with America, its culture, and its people. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 329. African-American Religion. 3 Hours

An exploration of the history and theology of African-American religious traditions and how African-American religion has influenced AfricanAmerican social, political, economic, and cultural movements from the time of slavery to the present. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 330. Faith of Immigrants. 3 Hours

This course will examine the faith traditions of all those people who came to the united States, either voluntarily or involuntarily, and the changes that they made upon those who were there before them, the changes in their own faith, and the effect upon other faith traditions.

## REL 344. Christian Marriage. 3 Hours

Analysis of the sanctifying dignity of Christian marriage as a sacrament and commitment to share in the divine creative plan. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 352. Understanding Sacred Music in Worship in the Local Church. 3 Hours

Focus on the important relationship between music and worship in the life of the church with an emphasis on major contemporary trends in sacred music and work. An historical overview of music and worship with biblical foundations for both are provided. Prerequisite(s): REL 103 (ASI 110/120).

## REL 356. The Christian Tradition of Prayer. 3 Hours

Study of several types and forms of Christian prayer from various periods in Church history. The meaning of the act of faith expressed in prayer and its relationship to belief. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 358. Liberation Theology. 3 Hours

Historical-critical analysis and study of the theology of liberation and its specific expression among theologians of the Third World, particularly Latin America. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 360. Christian Ethics. 3 Hours

Introduction to the reflection upon Christian morality; discussion of various approaches in Christian ethics, the elements of ethical judgments, and some specific ethical issues. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 362. Christian Family Values \& Television. 3 Hours

Comparative study of the criteria and rationale for family life in various Christian pronouncements with present values and practices in society as reflected in and promoted by current television programming. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 363. Faith \& Justice. 3 Hours

This course explores the history, development, and basic principles of Catholic social teaching as well as other approaches to faith and justice. Issues of economic justice will receive special emphasis. In addition to church documents, the life and work of religious thinkers and activists will be examined. Prerequisite(s): (ASI 111, ASI 112 or equivalent) or (REL 103 or REL 198).

## REL 364. Current Moral Issues. 3 Hours

An examination of one or more issues (individual and/or social) in contemporary reflection on Christian moral life. May be repeated when topic changes. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 365. Christian Ethics \& the Environment. 3 Hours

Christian ethic of relationality and responsibility. Explores various approaches and related values found in society; elements of ethical judgments; and specific ethical issues resulting from ecofeminist, technological, and ecological awareness. Prerequisite(s): (ASI110, 120 or equivalent) or (REL 103 or REL 198).

## REL 366. The Holocaust: Theological \& Religious Responses. 3 Hours

Examination of the religious and theological literature of the Holocaust, focusing especially on Jewish and Christian responses. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 367. Christian Ethics \& Health Care Issues. 3 Hours

Study of, and reflection upon, the principles of Christian ethics as these relate to the health care professions. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 368. Christian Ethics \& the Business World. 3 Hours

Study of, and reflection upon, the principles of Christian ethics as these relate to the business world. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 369. Christian Ethics \& Engineering. 3 Hours

Study in applied Christian ethics addressing the moral issues facing engineers. How to make a moral decision, engineering as a profession, codes of ethics, safety, environmental issues, confidentiality, employee rights, whistleblowing, consulting, conflicts, and career choices.
Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 372. Religion \& Film. 3 Hours

Study of issues common to narrative films and religious thought; the power of various film techniques, dominant models in religious and film reflection, the similar roles imagination plays in film and religious thought. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 373. Religion \& Literature. 3 Hours

Joint study of literature and religion, seeking the sacred in the secular, discussing the doctrines of humans and of God in major modern writings, especially those of current collegiate interest. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 374. Religion \& the Arts. 3 Hours

Investigation of the religious interpretation of various art forms and the process by which the aesthetic experience assists in theological perception and construction. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 375. Religion \& Science. 3 Hours

Surveys of the ways science has affected religion on specific doctrines, methods of knowing what is true, and general world views; study of religious response to these. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 376. Theology \& the Social Sciences. 3 Hours

Exploration of developments in Christian theology that have paralleled the rise of the human sciences, in particular of concepts of God, humanity, Church, sacraments, sin, and salvation in the light of history, anthropology, psychology, and sociology. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

REL 377. The Inner Journey in Myth, Bible \& Literature. 3 Hours Study of stories of heroic figures in the Bible and in other literature as patterns of personal and spiritual development. Throughout, efforts to relate the material to the needs of contemporary persons. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 378. Neorealism Modern Religion. 3 Hours

This course introduces students to the post-World War II film movement of Italian neorealism and its influence in global cinema. It examines neorealism as a significant cinema of moral, religious and social thought that has influenced 20th and 21st-century global culture.

## REL 383. Philosophy of Religious Education. 3 Hours

An attempt to construct a philosophy of religious education, various contemporary theoretical models, dimensions of teaching religion in a pluralistic society, the polarization generated. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 399. Readings in Religious Studies. 1-3 Hours

Directed readings in a specific area of interest under the supervision of a staff member. May be taken more than once. By permission only. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 425. Augustine. 3 Hours

The life and work of Augustine of Hippo (354-430), a major theologian of Western Christianity. His influence is strongly felt in both Protestant and Catholic traditions in areas of sexual ethics, church-state relations, Trinitarian and sacramental theology. Prerequisite(s): REL 103.

## REL 429. Modern Catholicism. 3 Hours

An examination of Modern Catholicism based on a close study of the context, process, decisions, implementation, and challenges of Vatican II in the Roman Catholic Church. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 437. Significance of Jesus. 3 Hours

Emphasis on the identity of Jesus and on the significance that his ministry, death, and resurrection have for the salvation of humankind. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 440. The Church. 3 Hours

Biblical and theological study of the meaning of the Church which explores the relationship between Christ and the Church, the various models for understanding the Church, and the mission of the Church. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or 198).

## REL 441. Theology of Mary. 3 Hours

Study of the place of the Mother of God in the great truths of faith in the light of chapter eight of the Constitution on the Church. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 442. God \& Atheism. 3 Hours

Study of some recent contributions made by theology, philosophy, psychology, and the humanities to the current discussion of God's existence, nature, and relationship to humanity. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 443. The Sacraments. 3 Hours

Study of the meaning of sacramentality. The sacraments in the context of Christ as the sacrament of the human encounter with God and in the context of the Church as the sacrament of Christ. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 444. God in Christian Tradition. 3 Hours

Review of theologies of God in Christian tradition, from biblical through contemporary sources, especially as these theologies have affected overall Catholic thought and spirituality. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198); PHL 103.

## REL 446. Christian Liturgy. 3 Hours

Study of the basic principles of liturgy, the development of some of the basic forms of liturgy, and applications of the principles within current rites. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 447. Selected Catholic Doctrines. 3-4 Hours

Detailed study of several important current theological questions primarily from a Catholic systematic and historical perspective. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 449. Aquinas. 3 Hours

Theology of Aquinas including: Trinity, human nature, providence, grace, virtue, Christ, and sacraments. Some attention given to historical context and contemporary interpretation, but the main focus will be reading and understanding the Summa. Prerequisite(s): REL 103.

## REL 471. Women \& Religion. 3 Hours

Examination of the impact of the women's movement on Judaism, Christianity, and other major world religions. Survey of traditional religious attitudes toward women. Relevance of feminist approaches to scripture, ethics, spirituality, and ministry in understanding contemporary global issues. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 472. Ecology \& Religion. 3 Hours

Examination of the relationship between religion and ecology; bridges the contributions of traditional theological inquiry and modern scientific insights and offers an enlarged vision of ecological concerns. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 474. Women \& the Global Church. 3 Hours

An exploration of the intersection between faith communities, traditional and non-traditional, and particular cultures in the lives of contemporary women. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## REL 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## REL 484. Practicum. 3 Hours

Supervised in-service experience in an area of religious education chosen by the student. By permission only. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 485. Lay Ministry. 3 Hours

Critical examination of lay ministry and its theological basis, in light of Vatican II and recent trends in the world and Church. Special topics: family ministry, ministry in the marketplace, leadership, evangelization, catechesis, women, social justice. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 487. Religious Education- Theory \& Practice. 3 Hours

Study of theory and practice of religious education for those who will be teaching religion in the school and parish. Various models and methods. Emphasis on process and religious education as developmental. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 488. Spirituality \& Religious Education. 3 Hours

Exploration of impact of liturgy and spirituality on contemporary models of religious education; study of interrelationship between faith experience and religious content; basic principles for developing practical programs. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## REL 490. Capstone Seminar. 3 Hours

Study of a particular topic in religion or theology that draws upon a variety of resources in the fields. This course provides an integrative academic experience. Topic varies from semester to semester. Required of all majors, open to minors. May be repeated. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198); junior or senior standing.
REL 492. Special Topics. 1-3 Hours
Concentrated study of issues and subjects pertinent to religion. May be repeated when topic changes. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## Sociology, Anthropology, and Social Work

## Major:

- Bachelor of Arts, Sociology (p. 254)

Minors:

- Sociology (p. 254)
- Anthropology (p. 254)
- Social Work (p. 254)

Sociology is the scientific study of society. The unique insight of sociology is that people are who they are largely because of their social experiences and interactions with others. "The sociological imagination" is the ability to understand the relationship between the individual experience and the broader social context. In addition to studying various aspects of social behavior, sociology studies the nature and causes of social problems such as crime, marital instability, poverty, and racism. The challenge facing sociologists is to apply their knowledge in ever more constructive ways for the improvement of society.

Students intending to major or minor in sociology should consult with the department chairperson to plan their programs of courses. The sociology major program is also offered in India in conjunction with the Marianists. The requirements for majoring in sociology are stated in the outline below. Criminal justice studies is also one of the majors listed in this department. View CJS program requirements. (http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/ programsofstudy/criminaljusticestudies)

The minors in sociology, anthropology, and social work consist of fifteen semester hours. The minor in criminal justice studies consists of eighteen semester hours.

## Faculty

Laura M. Leming, F.M.I., Chairperson
Professors: Curran, Davis-Berman, Donnelly, L. Majka, T. Majka, Miller
Associate Professors: Becker, Jipson, Leming, Picca
Assistant Professors: Cassiman, Dasgupta, Forbis, Longazel, ThompsonMiller
Lecturers: Holcomb, Kim, Litka

## Bachelor of Arts with a major in Sociology (soc) Minimum 124 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3

CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable
Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable |
| :--- | :--- |
| credit |  |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

| Major Requirements ${ }^{1}$ | 37 |
| :--- | :--- | ---: |
| SOC 101 Prin of Sociology 3 <br> (p. 253)   <br> or SOC 204 Mod Social Problems  <br> (p. 253)   <br> SOC 208 <br> (p. 253) Social Resrch Methds  |  |


| $\begin{aligned} & \text { SOC } 303 \\ & \text { (p. 253) } \end{aligned}$ | Modern Social Theory | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { SOC } 308 \\ & \text { (p. 253) } \end{aligned}$ | Data Analysis | 3 |
| $\begin{aligned} & \text { SOC } 351 \\ & \text { (p. 253) } \end{aligned}$ | Urban Sociology | 3 |
| $\begin{aligned} & \text { SOC } 408 \\ & \text { (p. 253) } \end{aligned}$ | Sr Project Design | 1 |
| $\begin{aligned} & \text { SOC } 409 \\ & \text { (p. 253) } \end{aligned}$ | Senior Project (Satisfies CAP Major Capstone) | 3 |
| Select six | urses (May include CAP Components) ${ }^{2}$ | 18 |

## Minor in Anthropology (ant)

Anthropology is the study of people at all times and places. It emphasizes understanding total cultural systems. A minor in anthropology consists of fifteen semester hours. Students intending to minor in anthropology should consult with the department chairperson to plan their selection of courses.

## Anthropology

ANT $150 \quad$ Cultural Anthropolgy 3 (p. 253)

| Select four ANT courses (300/400 level) | 12 |
| :--- | :--- |
| Total Hours | 15 |

## Minor in Social Work (swk)

Social work is the profession sanctioned by society to provide social services. It is the professional activity of helping individuals, groups, or communities to enhance or restore their capacity for social functioning. The profession also engages in activities aimed at facilitating societal conditions that enhance and/or restore social functioning.

A minor in social work consists of fifteen semester hours.

## Social Work ${ }^{1}$

| Select fifteen SWK semester hours $^{2}$ | 15 |
| :--- | :--- |

Total Hours
1 No more than six semester hours of field experience credit can be accepted toward the minor. The field experience course requires students to take or have taken SWK 201 (p. 253), Social Work Practice.
2 At least twelve semester hours at the 300/400 level.

## Minor in Sociology (soc)

## Sociology

| Select fifteen SOC semester hours ${ }^{1}$ | 15 |
| :--- | :--- |
| Total Hours | 15 |

1 At least twelve semester hours at the 300/400 level.

## Anthropology Courses

## ANT 150. Cultural Anthropology. 3 Hours

Basic principles of cultural anthropology. Survey of human adaptation to and adjustment of the environment by means of culture; comparison of ways of life among peoples of the world for inferences toward understanding human behavior. Required for anthropology minors.

ANT 300. Evolution of People \& Culture. 3 Hours
Survey of human biological and cultural evolution from prehuman ancestors to settled city-states. Consideration of contemporary peoples at various levels of social complexity.

## ANT 306. Culture \& Power. 3 Hours

Exploration of how culture and power are intertwined in the process of transformation of cultural beliefs and practices around the world. Focus on the ways in which anthropologists have studied modern state formation, and the attendant cultural politics, in local, regional, national, and international contexts. Prerequisite(s): ANT 150.

## ANT 310. Culture \& Personality. 3 Hours

Survey of studies investigating the relationship between cultural environment and the individual. Material drawn from both literate and nonliterate societies.

## ANT 315. Language \& Culture. 3 Hours

Introduction to the scientific study of language and its relationship to other aspects of human behavior.

## ANT 320. Anthropology of Childhoods. 3 Hours

Survey of anthropology research on issues related to children and childhood. Cross-cultural comparison of changing conceptions and varied experiences of the developmental stage known singularly as 'childhood', with a special emphasis on children as social agents and childhoods as lived experiences. Prerequisite(s): ANT 150.

## ANT 325. Anthropology of Human Rights. 3 Hours

An overview of anthropological approaches to human rights, weighing human rights universals against situations of cultural particularity. Prerequisite(s): ANT 150.

## ANT 335. Urban Anthropology. 3 Hours

Survey of anthropology research on urban issues. Considers how cities arose and how urban people make a living, organize, and think. Considers urban futures.

ANT 336. Epidemics, Power \& the Human Condition. 3 Hours Epidemics, Power and the Human Condition.

## ANT 352. Cultures of Latin America. 3 Hours

Origin and development of ancient civilizations including the Aztec, the Maya, and the Inca. Survey of contemporary cultures, with special emphasis on peasant life.

## ANT 356. Cultures of Africa. 3 Hours

Examination of Africa through the lens of anthropology. Exploration of late colonial and postcolonial eras, with a focus on gender, kinship, ethnicity, politics, religion, and prospects for the future. Consideration of the production of knowledge about and dominant representations of Africa. Prerequisite(s): ANT 150.

## ANT 360. Cultures of South Asia. 3 Hours

Examination of South Asia through the lens of anthropology. Explores the postcolonial era, South Asia's dynamic religious traditions, the study of caste, 'Bollywood' and popular cultures, Hindu nationalism, and the South Asian diaspora in the West.

## ANT 368. Immigration \& Immigrants. 3 Hours

Perspectives on immigration and ethnicity. Studies of social and economic adaptation of new immigrants and the second generation in communities, cities, and societies. Ethnic change, conflict, and contemporary national and international issues, with an emphasis on human rights. (Same as SOC 368.) Prerequisite(s): (SOC 101 or SOC 204) or ANT 150.

## ANT 392. Special Topics in Anthropology. 1-6 Hours

Intensive examination of current thematic, theoretical, or methodological issues from the viewpoint of anthropology. May be repeated as topics change. Prerequisite(s): ANT 150; permission of instructor.

## ANT 449. Anthropological Field Work. 1-6 Hours

Formulation and carrying out of a research design in archaeology, physical anthropology, linguistics, or cultural anthropology. Prerequisite(s): Permission of instructor.

## ANT 477. Honors Thesis. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## ANT 478. Honors Thesis. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

ANT 497. Service Learning Experience. 1 Hour
Supervised community research or service experience that complements a specific upper division course in Anthropology. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Anthropology course.
ANT 498. Independent Study. 1-6 Hours
Research problems or readings of special interest investigated under the guidance of an anthropology staff member. Prerequisite(s): Permission of department chairperson.

## Social Work Courses

## SWK 201. Social Work Practice \& Profession. 3 Hours

Study of the historical and theoretical underpinnings of the social work profession. Study of social work practice theory and technique.
SWK 303. Community Practice \& Research. 3 Hours
Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. (Same as SOC 309.) Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

SWK 305. Social Services in the Health Field. 3 Hours
The role of social services in health care facilities and governmental health programs. U.S. health care policies and programs; methods of social work intervention in medical settings.

## SWK 307. Mental Health Services. 3 Hours

Study of historical perspectives, deinstitutionalization, the community mental health movement, inpatient care, and innovative approaches. Policy and practice implications are examined.

## SWK 310. Law \& Human Services. 3 Hours

Orientation to the legal system as it affects the provision of human services and the profession; social legislation and court decisions as they affect child welfare, public assistance, mental health, housing, and probation and parole services.
SWK 325. Child Abuse. 3 Hours
Comprehensive study of child abuse: its history, scope, causal factors, indicators for detection, treatment resources and modalities, and community responsibility.

## SWK 327. Parenting: Social Welfare Role. 3 Hours

Comprehensive study of historical and contemporary perspectives on parenting, future of parenting (assessing trends and choices in family structure and function), cross-cultural comparisons, policy and legal aspects of parenting, societal influences on parenting.

## SWK 330. Perspectives on Aging. 3 Hours

An introduction to the field of gerontology. Focus on the major physical, psychological, and social dynamics of aging. Selected issues will be highlighted. (Same as SOC 330.).
SWK 331. Death, Dying \& Suicide. 3 Hours
Study of the phenomena of death and dying. The role and responsibility of the professional in working with the dying and their survivors. Study of suicide in this society.

## SWK 335. Social Work \& Environmental Justice. 3 Hours

Study of the impact of environmental degradation upon individuals and communities and the role of social work in advocating for environmental justice. Topics include health, disasters, environmental degradation, human rights, and advocacy.

## SWK 360. International Social Work. 3 Hours

Study of the role of social workers in international contexts. Topics include migration, globalization, development, conflict, and the ethical implications of social workers practicing internationally.

## SWK 370. Social Welfare Policy. 3 Hours

Study of U.S. social welfare policy and its impact upon populations of interest to social workers and other helping professionals. Topics include history of social welfare policy, ideologies that inform social welfare policy, attention to the gendered nature of social policy, international social welfare policy, contemporary policy debates and the role of social workers and allies in the policy arena.

## SWK 392. Special Topics. 1-3 Hours

Exploration of special topics related to the field of human services. Assessment of appropriate literature and research. May be repeated as topics change.

## SWK 401. Community Field Experience. 5 Hours

Supervised field experience for students working in a micro or macro practice setting. Concurrent seminar includes intensive basic communication and interviewing skill development. Students spend 150 hours in the agency. Prerequisite(s): SWK 201; permission of instructor.
SWK 465. Independent Study. 1-3 Hours
Individual research, study, and readings on specific topics and/or projects of importance to social work. Under individual faculty direction. Prerequisite(s): Permission of instructor.

## SWK 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approval of University Honors Program.

## SWK 478. Honors Thesis Project. 3 Hours

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## SWK 497. Service Learning Experience. 1 Hour

Supervised community research or service experience that complements a specific upper division course in Social Work. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Social Work course.

## Sociology Courses

SOC 101. Principles of Sociology. 3 Hours
Study of social groups, social processes, and society; the individual's relationship to society, social structure, social inequality, ethnic minorities, cities and human populations, and social institutions such as the family, education, religion, and government.

## SOC 204. Modern Social Problems. 3 Hours

Course to familiarize nonsociology majors with contemporary problems in society; historical development, current status, and analysis of problems, using modern social theories. Content may vary from section to section.

## SOC 208. Social Research Methods. 3 Hours

Study of the logic of research design, data-gathering strategies, types of measurement, and sampling techniques. Both inductive and deductive approaches. Participation in research projects. Prerequisite(s): SOC 101 or SOC 204.

## SOC 303. Modern Social Theory. 3 Hours

Consideration of the works of modern theorists and major trends in the history of social thought. Prerequisite(s): SOC 101 or SOC 204.

SOC 305. Criminological Theory. 3 Hours
Study of the major theories of crime; consideration of the implications of theory for the criminal justice system. Prerequisite(s): SOC 101 or SOC 204.

## SOC 308. Data Analysis. 3 Hours

The analysis and interpretation of both quantitative and qualitative social science data. Prerequisite(s): SOC 208. Corequisite(s): SOC 308L.
SOC 308L. Data Analysis Laboratory. 1 Hour
Training in appropriate computer programs and computer analysis of social science data. Prerequisite(s): SOC 208. Corequisite(s): SOC 308.
SOC 309. Community Practice \& Research. 3 Hours
Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. (Same as SWK 303.) Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

## SOC 321. The Sociology of Work \& Occupations. 3 Hours

Survey of the major features of work and occupations in industrial society. The meaning of work, occupational choice and recruitment, occupational socialization, career patterns, and occupational rewards. Unemployment, underemployment, sex-typing, automation and alienation.

## SOC 322. Sex Roles \& Society. 3 Hours

Research findings and major analytical approaches to study social and cultural influences on the development of personal sexual identity and relationships between men and women. Major social issues concerning human sexuality.

## SOC 323. Juvenile Justice. 3 Hours

The environmental and internal factors that influence or determine delinquent behavior; roles of individual juvenile offenders, parents or guardians, school, church, police, business community, community agencies, and the juvenile justice and correctional system in preventing and treating delinquent behavior. Prerequisite(s): SOC 101 or SOC 204.

## SOC 325. Deviant Behavior. 3 Hours

Description of various types of deviant behavior; for example, mental illness, alcoholism, drug addiction, the professional criminal. Study of explanations for the consequences and the role of deviant behavior in modern society. Prerequisite(s): SOC 101 or SOC 204.

## SOC 326. Law \& Society. 3 Hours

Study of the legal system and practices from a sociological point of view; the historical origin and role of the law in society, issues relating to the law as an instrument of social control and/or social change; analysis of the legal profession.

## SOC 327. Criminology. 3 Hours

Social and cultural nature, origin, and development of law; criminal behavior; crime control. The influence of society in the creation and organization of legal and crime control systems. Biological, psychological, and sociological factors leading to criminal behavior. Prerequisite(s): SOC 101 or SOC 204.

## SOC 328. Racial \& Ethnic Minorities. 3 Hours

Study of the major immigrant and racial groups in the United States and other countries. Issues and problems related to their minority status in the dominant culture.

## SOC 330. Perspectives on Aging. 3 Hours

An introduction to the field of gerontology. Focus on the major physical, psychological, and social dynamics of aging. Selected issues will be highlighted. (Same as SWK 330.).

## SOC 331. Marriage \& the Family. 3 Hours

Historical, cross-cultural, and current study of social relationships during dating and courtship, interpersonal communication in marriage and family life, sexuality in marriage, adjustments in parenthood, divorce and remarriage, alternatives to traditional marriage, and the future of marriage and family life.

## SOC 332. Sociology of Women. 3 Hours

Cross-societal analysis of the position of women, with emphasis on industrialized and developing societies. The social positions of women and men in the family, work, politics, and the legal system. Consideration of theories of the biological, psychological, and sociological bases for the behavior and characteristics of women in the context of societal institutions.

## SOC 333. Sociology of Sexualities. 3 Hours

Examination of theoretical and conceptual issues, empirical research and social policies germane to the sociological study of human sexuality. Topics include: sexual identity and orientation; sexuality throughout the life-course; sexual assault and coercive sexuality; social control of sexuality; social locations (race, class, and gender) and sexuality; and the relationship between sexuality and the socio-political process. Prerequisite(s): SOC 101 or SOC 204.

## SOC 334. Religion \& Society. 3 Hours

Definitions of religion and its role in society. Traditional and nontraditional expressions of religious life from the viewpoint of society. Varieties of religious experience and the interrelations between religious phenomena and other social institutions and societal behavior. Prerequisite(s): SOC 101 or SOC 204.

## SOC 336. Organizations in Modern Society. 3 Hours

Analysis of the dynamics of organizations in modern industrial society. Organizational social psychology, organizational structure and process, and organization-community relations. Prerequisite(s): SOC 101 or SOC 204.

## SOC 337. Political Sociology. 3 Hours

Study of political power. Political influence by economic elites, impact of bureaucracies, competing ideologies, alienation and nonvoting, and social movements as challenges to power structures. Prerequisite(s): SOC 101 or SOC 204.

## SOC 339. Social Inequality. 3 Hours

Study of social inequality in society. Emphasis on the processes that divide people into unequal groups based on wealth, status, and power. The effects of inequality on individual life chances and life styles.

## SOC 340. Social Psychology in Society. 3 Hours

Survey of the basic principles, concepts, theories, and methods of social psychology from the sociological perspective. Prerequisite(s): SOC 101 or SOC 204.

## SOC 341. Self \& Society. 3 Hours

Study of the relationship between self and others. Socialization, self conceptions, deviant behavior, social influence, and social control.

## SOC 342. Collective Behavior. 3 Hours

Study of social protest, crowds, social movements, revolution, fads, fashion, public opinion processes, propaganda, and political and social responses to these phenomena. Prerequisite(s): SOC 101 or SOC 204.

## SOC 343. Mass Communication in Modern Society. 3 Hours

Social-psychological analysis of the structure and processes of mass communication related to advertising, patterns of social behavior, social change, propaganda, censorship, media control, and social institutions.

## SOC 344. Interaction Processes. 3 Hours

Study of the interaction processes of social life. Bargaining and negotiation, cooperation, social influence, solidarity, competition, and conflict. Prerequisite(s): SOC 101 or SOC 204.

## SOC 345. Sociology of Extremism. 3 Hours

Study of the social understanding and social construction of identity, otherness, difference, and extremism in such cases as the development of white racial extremism in the United States. Prerequisite(s): SOC 101 or SOC 204.

## SOC 348. Crime, Film \& Society. 3 Hours

This course will examine the portrayal of crime and justice in feature length films and how these films influence how our society views issues related to crime. The primary focus will be on the American criminal justice system (law enforcement, courts, and corrections) and the broader topic of justice. Prerequisite(s): (SOC 101 or SOC 204) or CJS 101 or permission of instructor.

## SOC 351. Urban Sociology. 3 Hours

The study of the development of urban life from ancient times to the present, with an emphasis on contemporary urban population characteristics, social-economic-political structure, and problems. Prerequisite(s): SOC 101 or SOC 204.

## SOC 352. Community. 3 Hours

Study of the interaction of groups and individuals related by common situations, problems and intentions; creation, maintenance, eclipse, and restoration of close social ties in urban neighborhoods, small towns, and groups with similar interests and lifestyles.

## SOC 353. Internet Community. 3 Hours

No description available.

## SOC 354. Prespective on Childhood. 3 Hours

No description available.

## SOC 355. Families \& the Economy. 3 Hours

The relationship between families and their socio-economic environment. Consideration of public issues including family policy and government programs to assist families. Prerequisite(s): SOC 101 or SOC 204.

## SOC 368. Immigration \& Immigrants. 3 Hours

Perspectives on immigration and ethnicity. Studies of social and economic adaptation of new immigrants and the second generation in communities, cities, and societies. Ethnic change, conflict, and contemporary national and international issues, with an emphasis on human rights. (Same as ANT 368.) Prerequisite(s): (SOC 101 or SOC 204) or ANT 150.

## SOC 371. Sociology of Human Rights. 3 Hours

Examination of theories, research, and social policies pertinent to the sociological study of human rights. Topics include: progress and challenges in the evolution and application of human rights norms; global stratification, poverty and human development; social locations (race, class, gender, and age) and human rights; the relationship between human rights and development; and social movements and human rights promotion. Prerequisite(s): (SOC 101 or SOC 204) or permission of instructor.

## SOC 392. Selected Topics in Sociology. 1-6 Hours

Examination of a current topic of general interest in sociology. Majors and nonmajors may enroll. Consult composite for topics. May be repeated as topic changes. Prerequisite(s): SOC 101 or SOC 204.

## SOC 394. Popular Culture in Society. 3 Hours

Introduction to an understanding of the collective behavior and structured activities of the popular culture and entertainment industry, the nature of musical choice, television, radio, Internet, genres and styles, distribution, performance, and the social construction of culture from a sociological perspective. Prerequisite(s): SOC 101 or SOC 204.
SOC 398. Social Science Scholars' Seminar. 3 Hours
Study and seminar discussion of selected sociological writings and the analysis, interpretation and criticism of these works. Open only to students in the Berry Scholars Program. Prerequisite(s): ENG 198; HST 198.

## SOC 408. Senior Project Design. 1 Hour

Preparation for sociology capstone course with a focus on a workable research topic, literature review, and research methods design. Required for Sociology majors. Prerequisite(s): SOC 303, SOC 308.

## SOC 409. Senior Project. 3 Hours

Capstone experience for sociology majors consisting of a seminar on research and writing in sociology, an empirical research project of the student's choosing, and a written and oral presentation of the research. Prerequisite(s): SOC 408.

## SOC 410. Victimology. 3 Hours

The study of victimization including the relationships between victims and offenders, the interactions of victims and the criminal justice system and other social groups and institutions. Prerequisite(s): SOC 101 or SOC 204; 12 hours of course work in the social sciences.

## SOC 426. Leadership in Building Communities. 3 Hours

Investigation of the processes by which urban neighborhoods develop themselves from the inside out. Students cultivate their own interdisciplinary appreciation of urban communities through extensive interaction with one neighborhood's visioning process. Topics include asset-based community development, social capital, citizenship, adaptive leadership, and community building strategies and tools. Same as POL 426. Prerequisite(s): Junior standing.

## SOC 432. Structure of Priviledge. 3 Hours

Study of the theoretical and conceptual issues, empirical research, and social policies germane to the sociological analysis of privilege. Topics include whiteness, men and masculinities, class-privilege, heterosexuality and heterosexism, and intersectionality. Prerequisite(s): SOC 101 or SOC 204.

## SOC 435. Economy \& Society. 3 Hours

Sociological analysis of modern economic institutions, with an emphasis on classical themes. Topics include capitalism, industrialism and social consequences of contemporary economic trends. Empirical research will be required. Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

## SOC 437. Marx \& Sociology. 3 Hours

Study of Marx's writings on topics relevant to the social sciences. Comparison of contemporary Marxian scholarship in such areas as social inequality, political structures, urban change, ideology and consciousness, and models for the future. Prerequisite(s): SOC 101 or SOC 204; junior or senior standing.
SOC 438. Urban Poverty. 3 Hours
Study of the social factors that contribute to poverty in cities. Consideration of the social effects of government and other programs to alleviate poverty. Prerequisite(s): SOC 101 or 204.

## SOC 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## SOC 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.
SOC 492. Special Topics in Sociology. 1-6 Hours
Intensive examination of current theoretical or methodological issues; faculty-advised research project or library work. Consult composite for topics. May be repeated as topic changes. Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

## SOC 495. Sociology Internship. 1-6 Hours

Supervised work experience related to course work in sociology in appropriate government, social service, and private organizations. May be repeated to a maximum of six semester hours. Prerequisite(s): Permission of department chairperson.

SOC 497. Service Learning Experience. 1 Hour
Supervised community research or service experience that complements a specific upper division course in Sociology. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Sociology course.

## SOC 498. Independent Study. 1-6 Hours

Research or special readings on problems of interest to the student under the guidance of sociology staff member. Prerequisite(s): Permission of department chairperson.

## Sustainability, Energy and Environment

The minor in Sustainability, Energy and the Environment (SEE) is a multidisciplinary effort to encourage students to explore complex societal sustainabilty issues that do not fit easily into one traditional academic discipline. The genesis of this program lies in the realization that a scientific and technical knowledge of environmental, ecological and energy system challenges will not be sufficient to develop viable answers. Many disciplines at the University make contributions to these issues, ranging from ethical, spiritual and artistic, to economic, political and sociological approaches. Students will be introduced to the minor through a seminar-style course, will take at a minimum two further team-taught and interdisciplinary courses, and will gain experience in interdisciplinary research.

Students desiring to minor in sustainability, energy and environment should notify the coordinator of sustainability, energy and environment.

## Sustainability, Energy and Environment Advisory Committee

Robert Brecha (Physics), Coordinator
Cassiman (Social Work), Fouke (Philosophy), Hallinan (Mechanical Engineering), Jablonski (Marianist Environmental Education Center and Religious Studies), Kwon (Visual Arts), McEwan (Biology), Pautz (Political Science), Potter (English), Wu (Geology)

## Minor in Sustainability, Energy and Environment (see)

| Sustainability, Energy and Environment ${ }^{1}$ |  |
| :--- | ---: |
| SEE 250 | Intr-Sustn Ergy\&Envr |
| (p. 259) |  |
| SEE Core |  |

Select one or two courses (3-6 hours) from:
ASI $320 \quad$ Cities and Energy
(p. 259)

ASI 322 Cities and Suburbs
(p. 259)
or ASI 323 Cities and Suburbs
(p. 259)
or ASI 324 Cities and Suburbs
(p. 259)

SEE 303 Constructns of Place
(p. 259)

Select no more than one course (0-3 hours) from: ${ }^{2}$
SEE 301 Glbl Chng\&Erth Sys
(p. 259)

BIO 359 Sustainable Biosphre
(p. 259)

BIO 395 Global Envr Biology
(p. 259)

GEO 208 Environmentl Geology
(p. 259)

CHM/GEO Energy Resources
234 (p. 259)
SEE Depth
(one course with experiential or research component) ${ }^{3}$

| SEE 401 <br> (p. 259) <br> \& SEE 402 <br> (p. 259) | Sustnblty Research I and Sustnblty Resrch II (SEE Depth Courses) |
| :---: | :---: |
| $\begin{aligned} & \text { SEE } 477 \\ & \text { (p. 259) } \\ & \& \text { SEE } 478 \\ & \text { (p. 259) } \end{aligned}$ | SEE-Honors Thesis and SEE-Honors Thesis |
| $\begin{aligned} & \text { ASI } 345 \\ & \text { (p. 259) } \end{aligned}$ | Topics Soc Sci Study |
| $\begin{aligned} & \text { ECO } 435 \\ & \text { (p. 259) } \end{aligned}$ | Eco of Environmnt |
| $\begin{aligned} & \text { ENG } 342 \\ & \text { (p. 259) } \end{aligned}$ | Literature and the Environment |
| HST 342 <br> (p. 259) | Environ Hst Americas |
| $\begin{aligned} & \text { PHL } 321 \\ & \text { (p. 259) } \end{aligned}$ | Environmental Ethics |
| $\begin{aligned} & \text { PHL } 334 \\ & \text { (p. 259) } \end{aligned}$ | Phl of Ecology |
| $\begin{aligned} & \text { POL } 371 \\ & \text { (p. 259) } \end{aligned}$ | Environmental Policy |
| $\begin{aligned} & \text { REL } 472 \\ & \text { (p. 259) } \end{aligned}$ | Ecology \& Religion |

SWK 335 SWK \& Envir Justice
(p. 259)
Total Hours
Students who wish to minor in Sustainability, Energy and
Environment should contact the coordinator of the Sustainability,
Energy and Environment minor.
2 Students with a major not otherwise requiring a biology course must
complete either SEE 301 (p. 259) (with its prerequisite) or BIO 359
(p. 259) or BIO 395 (p. 259).
3 Additional courses may be approved by SEE coordinator.

Courses
SEE 250. Introduction to Sustainability, Energy \& the Environment. 3 Hours
Emphasis on learning how to view complex issues from different disciplinary points of view, developing reading and critical thinking skills about current issues in sustainability, gaining an awareness of different ethical positions and how these influence the quest for solutions, and learning how scientific and sociopolitical processes work to investigate and address sustainability issues.

## SEE 301. Global Change \& Earth Systems. 3 Hours

Multidisciplinary introduction to the science of the earth system. Focus is on the interrelatedness of geological, biological, chemical and physical processes, and on methods used to understand both the past natural history and potential future scenarios for change in the earth system. Corequisite(s): BIO 101, SCI 230, or equivalent.

## SEE 303. Constructions of Place. 3 Hours

Multidisciplinary, arts-based course that explores the complex connections between our sense of place and the physical and environmental conditions that influence landscapes and communities.

## SEE 401. Sustainability Research I. 3 Hours

Interdisciplinary exploration of the issues of sustainability. The scientific, moral, spiritual, social, political, historical, ethical and economic dimensions of sustainability will be explored. Exploration of the foundations of ethical theory and their application to environmental issues. Students will pursue a research project with the primary focus o sustainability on campus. Prerequisite(s): PHL 103 or ASI 112 or ASI 120; completion of General Education Natural Science or CAP Natural Science Requirements: junior or senior standing.
SEE 402. Sustainability Research II. 3 Hours
An interdisciplinary exploration of the issues of sustainability as they affect the Dayton community. Course will also explore political philosophy and the ethical foundations of public policy. Students will choose an indepth community-based research project. Prerequisite(s): PHL 103 or ASI 112 or ASI 120; completion of General Education or CAP Natural Science Requirements; junior or senior standing.
SEE 477. Sustainability, Energy \& Environment Honors Thesis Project. 3 Hours
First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approval of University Honors Program.

## SEE 478. Sustainability, Energy \& Environment Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## Theatre

Major:

- Bachelor of Arts, Theatre (p. 260)

Minor:

- Theatre (p. 261)

A major in Theatre (THR), offered by the Department of Communication, provides a solid academic foundation plus the experience of working in a wide range of theatre productions, including mainstage productions in the Boll Theatre as well as experimental work in the Studio Theatre.

Theatre majors are required to audition for roles and participate in each mainstage production, for which they receive credit in THR 100 or THR 300.

A minor in theatre consists of twenty-one semester hours. Courses in dance are not included.

The Department of Communication also offers a concentration in Theatre (CTR (p. 142)).

Faculty
Jonathan A. Hess, Chairperson, Department of Communication Darrell F. Anderson, Program Director
Professor Emeritus: Gilvary
Associate Professor: Anderson
Assistant Professor: Dunlevy
Lecturer: Beran, Evans

## Bachelor of Arts with a major in Theatre (thr) Minimum 124 Hours

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humanities Commons ${ }^{1}$ |  | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |


| Natural Sciences | 7 |
| :---: | :---: |
| Crossing Boundaries | variable credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 Completed with ENG 200 H or ASI 120. |  |


| Major Requirements |  | 38 |
| :--- | :--- | ---: |
| THR 105 <br> (p. 260) | Intro to Theatre (Satisfies CAP Arts) |  |$\quad 3$

## THR 105. Introduction to Theatre. 3 Hours

Analysis of the nature of theatre, its origin and development from the standpoint of the play, the physical theatre, and its place in our culture. Required of all majors. Open to all University students.

THR 201. Basic Dance for the Performing Artist. 2-3 Hours
Beginning course in movement introducing the basic principles of dance and performance technique. Open to all University students.

THR 202. Stage Makeup. 2 Hours
The basic principles of the art and technique of makeup so that the student may use them in design and execution to develop and project the character. Open to all University students.

## THR 203. Technical Production. 3 Hours

Introductory survey of scene design, construction, painting, and lighting. Current theory will be examined along with practical applications and techniques.

## THR 206. Stage Management. 2 Hours

Study of methods and standards of stage management in the theatre. Emphasis on organizational and management practices common to most theatres. Development of skills in applying methods of stage management.

## THR 251. Beginning Tap Dance. 2 Hours

Beginning course in the theory and practice of tap dance.
THR 261. Beginning Jazz Dance. 2-3 Hours
Beginning course in the theory and practice of jazz dance.
THR 271. Beginning Ballet. 2-3 Hours
Beginning course in the theory and practice of classical ballet technique.
THR 300. Theatre Laboratory. 1-3 Hours
The third and fourth-year level of credit allowance for role playing and/or play production. Requirements and registration same as for THR 100.

THR 301. Intermediate Dance for the Performing Artist. 2 Hours Intermediate-level course in movement for students interested in further developing dance and performance technique. Prerequisite(s): Permission of department chairperson.

## THR 303. Scene Painting. 3 Hours

Basic prinicples of color paint theory and materials. Investigation of various scene-painting techniques. One three-hour class meeting weekly. Prerequisite(s): Permission of department chairperson.

## THR 305. Theatre Stagecraft. 3 Hours

Study and application of scene construction, rigging, backstage organization, production analysis, and technician-designer relationship.

## THR 307. Theatre Lighting. 3 Hours

Study and application of lighting for the stage: instruments, controls, sources, elements of electricity, and lighting design for all types of theatres, as well as graphic representation.

## THR 310. Acting I. 3 Hours

The study and practice of basic techniques in rehearsal and performance. Emphasis on self-analysis and self-awareness. Development of basic skills in vocal, emotional, and mental interpretation of character. Required of all theatre majors.

## THR 312. Film \& Television Acting. 3 Hours

The study and practice of basic techniques of acting for film and television. Emphasis on technical requirements of acting for the camera and the control of body and voice actors must exercise in these media. Prerequisite(s): THR 310.

## THR 320. Movement \& Voice for the Stage. 3 Hours

An integrated approach to the study of stage movement and voice production for the theatre.

## THR 323. Acting II. 3 Hours

Further study and practice of techniques introduced in Acting I. Emphasis on interaction, ensemble, group processes, and scene study. Prerequisite(s): (THR 105, 310) or permission of department chairperson.

## THR 325. Theory \& Criticism of the Stage I. 3 Hours

Survey of representative plays from classical to neo-classical periods as a basis for theatrical production and dramatic criticism. THR 325 or 326 required of all THR majors. Prerequisite(s): THR 105.
THR 326. Theory \& Criticism of the Stage II. 3 Hours
Continuation of THR 325 from romantic to modern periods. Prerequisite(s): THR 105.

## THR 330. Concepts of Scene Design. 3 Hours

Studies in the principles of composition and aesthetic theory as applicable to scene design. Development of personal design approach to plays of various styles. Required of all theatre majors.

THR 340. The Director in the Theatre. 3 Hours
The basic functions of a director in the production of play: interpretation, composition, movement, characterization, rhythm, design concept, and actor training. Required of all theatre majors. Prerequisite(s): THR 105, THR 310, THR 330.
THR 344. Acting/Directing for Musical Theatre. 3 Hours
Study of performance and directing techniques for Musical Theatre.

## THR 350. Theatre Styles. 3 Hours

Examination of the relationships among playwright, audience, actor, designer, and director in the development of major theatre styles of expression.

## THR 351. Intermediate Jazz Dance. 2 Hours

Intermediate course in the theory and practice of tap dance.

## THR 361. Intermediate Jazz Dance. 2 Hours

An intermediate course in the theory and practice of jazz dance and technique. Prerequisite(s): Permission of department chairperson.

## THR 370. Topics in Theatre Study. 1-6 Hours

Study of special topics or themes in theatre performance and production. May be repeated as topics change. Prerequisite(s): Permission of department chairperson.

## THR 371. Intermediate Ballet. 2 Hours

Intermediate course in the theory and practice of classical ballet technique. Prerequisite(s): Permission of department chairperson.

## THR 414. Advanced Scene Design. 3 Hours

Individual development in scene design through intensive study in plays of various styles. Detailed representation of design ideas in rendering and models required. Prerequisite(s): THR 330; permission of department chairperson.

## THR 415. History of the Theatre I. 3 Hours

History of theatre from pre-Grecian through Elizabethan; the physical theatre as reflection of and influence on civilization. (THR 415 or THR 425 required of all majors.).

## THR 424. Play Directing. 3 Hours

Study of the evolution of the modern director. Emphasis is on script interpretation as a basis for the development and execution of the production concept. Prerequisite(s): THR 340.

## THR 425. History of Theatre II. 3 Hours

Continuance of 415 from the Italian Renaissance to the modern theatre. (THR 415 or THR 425 required of all majors.).
THR 440. Problems in Theatre II. 3 Hours
Individual research and project work of student's selection under the direct supervision of faculty. (THR 440 or THR 485 or THR 490 required of all majors.) Repeatable up to twelve semester hours. Prerequisite(s): Permission of department chairperson.

## THR 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## THR 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## THR 485. Theatre Seminar. 3-6 Hours

Concentration on one theatrical figure, genre period, or discipline for research and analysis. (THR 440 or THR 485 or THR 490 required of all majors.) Repeatable up to six semester hours. Prerequisite(s): Permission of department chairperson.

## THR 490. Special Problems in Theatre. 3-5 Hours

Individual research and report on topic of student's choice in the field of theatre under direct supervision of faculty/staff. (THR 440 or THR 485 or THR 490 required of all majors.) Repeatable up to nine semester hours.

## THR 498. Theatre Internship. 1-3 Hours

Theatre work experience with an approved organization. Student must be in good academic standing with at least twelve hours of theatre courses completed. Student may petition the head of the Theatre Program for a second internship if the second internship is at a different organization and the student can demonstrate that the second internship offers a unique and signifcant educational opportunity not available through the first internship. Permission. Grading Option Two only.

## Visual Arts

Majors:

- Bachelor of Arts, Art History (p. 264)
- Bachelor of Arts, Visual Arts (p. 265)
- Bachelor of Fine Arts, Art Education (p. 266)
- Bachelor of Fine Arts, Fine Arts (p. 267)
- Bachelor of Fine Arts, Graphic Design (p. 268)
- Bachelor of Fine Arts, Photography (p. 269)

Minors:

- Art History (p. 269)
- Fine Arts (p. 270)
- Graphic Design (p. 270)
- Photography (p. 270)
- Visual Arts (p. 270)

The Department of Visual Arts provides quality education in the areas of art education, art history, fine art studio, photography, visual arts, and graphic design. The Department cultivates high standards for creativity, craft, conceptual understanding, critical analysis, historical scholarship, and pedagogy. Central to these pursuits are the artistic practice and scholarly research of faculty, the dedication of support staff to the department's educational objectives, and engaged teaching, learning, and scholarship. The Department of Visual Arts is a thriving learning community grounded in the Marianist tradition of educating the whole person. It is fully integrated with the College and the University and contributes significantly to our institutional commitment to excellence.

The department offers the following degrees:

## Bachelor of Arts Degree (B.A.)

The Bachelor of Arts (B.A.) is intended for those interested in a broad liberal arts education as an overarching part of their chosen major (Art History, Visual Arts). Approximately forty percent of the degree requirements are taken in the creation and study of visual arts particular to the chosen major. With this degree option it is possible for students to earn a minor, or even a second major, in another university offered discipline. The B.A. degree combines the major specific curriculum with visual arts foundation courses, and the College of Arts and Sciences and University general education requirements referred to as the Common Academic Program (CAP).

## Bachelor of Fine Arts Degree (B.F.A)

The Bachelor of Fine Arts Degree (B.F.A.) is an intensive "professional" program of study specifically tailored to prepare students to enter the field of their chosen major (Art Education, Fine Arts, Photography, Graphic Design) or to continue their studies in graduate school. Approximately sixty-five percent of the degree requirements are in the creation and study of the visual arts particular to the chosen major. The B.F.A. degree
combines the major specific curriculum with visual arts foundation courses, and the College of Arts and Sciences and University general education requirements referred to as the Common Academic Program (CAP).

## Majors include:

Bachelor of Arts (B.A.) with a Major in:

- Art History
- Visual Arts


## Bachelor of Fine Arts (B.F.A.) with Teacher Licensure Bachelor of Fine Arts (B.F.A.) with a Major in:

- Fine Arts
- Graphic Design
- Photography


## Program Descriptions:

## Art History (HOA)

Art history is the study of art and architecture produced within specific cultural contexts as a manifestation of human creativity and as a valuable form of historical documentation. Students learn to appreciate the fundamental and varied roles that the visual arts have played and continue to play in the lives of people around the globe. Toward this end, students learn how images and objects, identified as art, embody, but also condition and control social, religious, cultural, economic, political, and gender dynamics.

## Visual Arts (VAR)

The Bachelor of Arts (B.A.) with a major in Visual Arts is a flexible program that emphasizes a broad liberal arts education with supportive studies in art, design, and art history. This degree offers students a breadth of exploration of all areas making up the Department of Visual Arts. Studio and art history requirements constitute thirty-five to forty percent of the Visual Arts B.A. degree. To take advantage of the diverse academic environment that is the University of Dayton, students are encouraged to earn a minor or a second major within another discipline. Students may not obtain a dual-degree in Visual Arts and the following: Fine Arts (ART), Graphic Design (GDN), or Photography (PHO). It is permitted to double major in Visual Arts and Art History. In this case, the maximum of twelve semester hours of VAH courses allowed in the Visual Arts major may double count.

## Art Education (FAE)

The Bachelor of Fine Arts with Teacher Licensure, a B.F.A. (E11A) program, offers students expertise in studio practice, art history, aesthetics, and critical analysis of art. Field experience in the Dayton area allows students to transform theoretical knowledge into classroom practice. Graduates are well prepared for teaching positions in public or private schools, pre-kindergarten through grade twelve, as well as for master's degree programs.

## Fine Arts (ART)

The Bachelor of Fine Arts (B.F.A.) with a major in Fine Arts is a professional degree program that provides an intensive, in depth exploration of selected fine art media. Students choose an emphasis in ceramics, drawing, illustration, painting, printmaking, or sculpture.

## Graphic Design (GDN)

The Bachelor of Fine Arts (B.F.A.) with a major in Graphic Design is an intensive professional degree program designed to prepare students for careers in graphic and advertising design, electronic media and related new technologies.

## Photography (PHO)

The Bachelor of Fine Arts (B.F.A.) with a major in Photography is a professional degree that provides an intensive, in depth exploration of photographic media.

## Visual Arts Minors

- A Minor in Art History consists of eighteen semester hours. (For majors in visual arts, only six semester hours of the minor may double count.)
- A Minor in Fine Arts consists of twenty-one semester hours. (Not open to majors in visual arts.)
- A Minor in Photography consists of twenty-one semester hours. (Not open to majors in visual arts.)
- A Minor in Visual Arts consists of twenty semester hours. (Not open to majors in art education, fine arts, photography, or visual communication design.)
- A Minor in Graphic Design consists of twenty-one semester hours. (Not open to majors in visual arts.)
- Transfer students seeking a visual arts minor must complete at least nine of the required semester hours in the visual arts department while in residency at the University of Dayton.


## Visual Arts Foundations

Visual arts foundation courses introduce students to fundamental principles, practices, materials, and vocabulary common to all visual arts disciplines. These courses provide a common background of skill development along with an understanding of primary concepts in the visual arts and a basis for critical evaluation. All foundation courses share the objective of preparing students to face the challenges of their specific disciplines.

## Foundations Scholarship Review

During their second year, all Visual Arts majors are reviewed by the Visual Arts faculty. Participation in the Foundations Scholarship Review is mandatory for all Visual Arts majors. Students must receive a satisfactory review rating before graduating with a visual arts degree. Also included in the review are first and third year students who have been awarded Visual Arts Scholarships. The review process is a valuable learning experience for the student and it helps the faculty to recommend ways in which students may build upon their assets and overcome their liabilities. Monetary awards applied toward future tuition are available to a limited number of students whose performance in the review is judged by the faculty to be outstanding.

## Senior Capstone Courses

These courses, required in all majors, bring together the skills, education, ideas, and goals of senior students. They stress an integrated approach to learning and working and they focus on preparing students for their futures beyond the University. They provide a logical continuity that begins with the Visual Arts Foundations courses, the Foundations Scholarship Review and work within the major.

Faculty
Judith Huacuja, Chairperson
Professor Emeritus: Niles
Professors: Crum, Whitaker
Associate Professors: Clarke, Holscher Almazan, Huacuja, Jones, Kwon, Marcinowski, Matlack-Whitaker, Phelps, Wilbers
Assistant Professors: Bradshaw, Jennings
Lecturers: Kargl, Tsen

## Bachelor of Arts with a major in Art History (hoa) Minimum 124 Hours



Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable |
| :--- | :--- |
| credit |  |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Liberal Studies Curriculum

L2 Proficiency (Proficiency in a language other than English) 0-11
Literature (May include CAP Components) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements 42
VAH 101 Introduction to Visual Arts (Satisfies CAP Arts) 3
(p. 263)

| VAH 201 <br> (p. 263) | Survey of Art I | 3 |
| :---: | :---: | :---: |
| VAH 202 <br> (p. 263) | Survey of Art II | 3 |
| VAH 203 <br> (p. 263) | Survey of Art III | 3 |
| VAH 485 <br> (p. 263) | Art History Seminar (Satisfies CAP Major Capstone) | 3 |
| VAR 299 <br> (p. 263) | Second Year Review | 0 |
| Select seven VAH courses (300/400 level) |  | 21 |
| Select two major program courses ${ }^{1}$ |  | 6 |
| Breadth |  |  |
| VAR 100 <br> (p. 263) | Vis Arts Foundatn | 1 |
| Total Hours to total at least |  | 124 |
| 1 Major program courses may be chosen, in consultation with an art history advisor, from among the following disciplines and courses: ANT 300 (p. 263), CMM 313 (p. 263), ENG 322 (p. 263), VAF 104 (p. 263), VAF 232 (p. 263), PHL 320 (p. 263), PSY 375 (p. 263) and REL 374 (p. 263). Alternatives to these courses may be elected with the approval of an art history advisor. Major program electives must be at the 300-400 level (except in the case of Fine Arts courses), and they may not be used to satisfy the liberal studies requirements |  |  |

## Bachelor of Arts with a major in Visual Arts (var) Minimum 124 Hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$
ENG 200 Writing Seminar II
Oral Communication

| CMM 100 | Principles of Oral Communication |
| ---: | :--- |
| Mathematics | 3 |

Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variable <br> credit |
| :--- | :--- |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
variable 1 credit
Historical Studies
Diversity and Social Justice
Major Capstone ..... 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Liberal Studies Curriculum

L2 Proficiency (Proficiency in a language other than English) 0-11
Literature (May include CAP Components) 3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) 3
Natural Sciences (Satisfies CAP Natural Science) 11
Social Sciences (Includes CAP Social Science) 12
Major Requirements 45
VAD 220 Design Processes I 3
(p. 263)

VAF 104 Foundation Drawing 3
(p. 263)

VAF 112 Foundation 2-D Dsgn 3
(p. 263)

VAF 117 Foundation 3-D Dsgn 3
(p. 263)

VAF 216 Design and Color 3
(p. 263)

VAP 101 Foundatn Photogrphy 3
(p. 263)

VAP 201 Photography II 3
(p. 263)
or VAP 240 Digital Processes I
(p. 263)

VAR 299 Second Year Review 0
(p. 263)

VAR 495 Senior Project Seminar (With VAR 496, Satisfies 1
$\begin{array}{lll}\text { (p. 263) } & \text { CAP Major Capstone) } & \\ \text { VAR 496 } & \text { Project,Presnt\&Papr }\end{array}$
(p. 263)
Select one course from: (Satisfies CAP Arts)

| VAH 201  <br> (p. 263) Survey of Art I <br> VAH 202  <br> (p. 263)  <br> VAH 203  <br> (p. 263)  |
| :--- | :--- |

Select one VAH course (300/400 level) 3
Select five Visual arts courses ${ }^{1} \quad 14$
Breadth

| VAR 100 | 1 |
| :--- | ---: |
| (p. 263) | 1 |
| Total Hours to total at least | 124 |

Advanced Study

Philosophy and/or Religious Studies

Nine of the fourteen hours to be selected from at least two of the following: VAD, VAF, VAP, and VAR. Nine of the fourteen hours must be at the 300-400 level.

## Bachelor of Fine Arts with a major in Art Education (fae) Minimum 134 Hours



| VAF 204 <br> (p. 263) | Drawing II | 3 |
| :---: | :---: | :---: |
| VAF 216 <br> (p. 263) | Design and Color | 3 |
| VAF 226 <br> (p. 263) | Painting I | 3 |
| VAF 232 <br> (p. 263) | Sculpture I | 3 |
| $\begin{aligned} & \text { VAF } 240 \\ & \text { (p. 263) } \end{aligned}$ | Ceramics I | 3 |
| or VAF 242 <br> (p. 263) | Ceramics II: Wheel Throwing |  |
| $\begin{aligned} & \text { VAF } 253 \\ & \text { (p. 263) } \end{aligned}$ | Printmaking I | 3 |
| or VAF 353 <br> (p. 263) | Printmaking II |  |
| $\begin{aligned} & \text { VAF } 304 \\ & \text { (p. 263) } \end{aligned}$ | Drawing III | 3 |
| $\begin{aligned} & \text { VAF } 498 \\ & \text { (p. 263) } \end{aligned}$ | Senior/Prof Seminar (With VAF 499, satisfies CAP Major Capstone) | 3 |
| $\begin{aligned} & \text { VAF } 499 \\ & \text { (p. 263) } \end{aligned}$ | Portfolio \& Paper:FA | 1 |
| $\begin{aligned} & \text { VAP } 101 \\ & \text { (p. 263) } \end{aligned}$ | Foundatn Photogrphy | 3 |
| $\begin{aligned} & \text { VAR } 299 \\ & \text { (p. 263) } \end{aligned}$ | Second Year Review | 0 |
| Select two courses from: (Satisfies CAP Arts) |  | 6 |
| VAH 201 <br> (p. 263) | Survey of Art I |  |
| VAH 202 <br> (p. 263) | Survey of Art II |  |
| VAH 203 <br> (p. 263) | Survey of Art III |  |
| Select one course from: |  | 3 |
| VAH 470 <br> (p. 263) | 19th Century Art I |  |
| VAH 471 <br> (p. 263) | 19th Century Art II |  |
| VAH 480 <br> (p. 263) | 20th Century Art I |  |
| VAH 483 <br> (p. 263) | 20th Century Art II |  |
| Select one VAH course |  | 3 |
| Select four VAR courses |  | 12 |
| Education requirements: |  | 28 |
| EDT 110 <br> (p. 263) <br> \& 110L (p. 26 | Profession-Teachng and Prfssn Tchng Lab | 3 |
| EDT 207 <br> (p. 263) <br> \& 207L (p. 26 | Chld\&Adol In Eductn and Chld \& Adlsct Ed Lab | 4 |
| EDT 305 | Phil\&Hist of Amer Ed (Satisfies CAP Practical Ethical Action, and Advanced Study in Philosophy) | 3 |
| $\begin{aligned} & \text { EDT } 340 \\ & \text { (p. 263) } \end{aligned}$ | Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative, and Diversity and Social Justice) | 3 |


| $\begin{aligned} & \text { EDT 340L } \\ & \text { (p. 263) } \end{aligned}$ | Ed Dvs st Pop Inc Lb | 0 |
| :---: | :---: | :---: |
| EDT 459 (p. 263) | Crt Rdg Wrtg Cnt Ar | 3 |
| $\begin{aligned} & \text { EDT } 477 \\ & \text { (p. 263) } \end{aligned}$ | Stdt Tchng-Art K-12 | 12 |
| Breadth |  |  |
| VAR 100 <br> (p. 263) | Vis Arts Foundatn | 1 |
| Total Hours | al at least | 134 |
| 1 Students in the Art Education program are required to maintain a 2.5 cumulative grade point average overall, and a 2.5 cumulative grade point average in teacher education and visual arts courses. |  |  |
| 2 Students are required to pass PRAXIS I and II and a Second Year Review in their studio work. |  |  |
| Bachelor of Fine Arts with a major in Fine Arts (art) Minimum 132 Hours |  |  |

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |


| Crossing Boundaries | variabl <br> credit |
| :--- | :--- |


| Faith Traditions |  |
| :--- | ---: |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |
| Advanced Study |  |
|  |  |
| Philosophy and/or Religious Studies | 3 |
| Historical Studies | $0-3$ |
| Diversity and Social Justice | Major Capstone |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Major Requirements

79VAF 104 Foundation Drawing 3
(p. 263)

VAF 112 Foundation 2-D Dsgn 3
(p. 263)

VAF 117 Foundation 3-D Dsgn 3
(p. 263)

VAF 204 Drawing II 3
(p. 263)

VAF 216 Design and Color 3
(p. 263)

VAF 226 Painting I 3
(p. 263)

VAF 232 Sculpture I 3
(p. 263)

VAF 253 Printmaking I 3
(p. 263)
$\begin{array}{lll}\text { VAF 304 } & \text { Drawing III } & 3 \\ \text { (p. 263) } & & \\ \text { VAF 326 } & \text { Painting II } & 3\end{array}$
(p. 263)
$\begin{array}{lll}\text { VAF 332 } & \text { Sculpture II } & 3 \\ \text { (p. 263) } & & \\ \text { VAF 353 } & \text { Printmaking II } & 3\end{array}$

| (p. 263) | Printmaking II |  |
| :---: | :---: | :---: |
| VAF 498 <br> (p. 263) | Senior/Prof Seminar (With VAF 499, satisfies CAP Major Capstone) | 3 |
| VAF 499 <br> (p. 263) | Portfolio \& Paper:FA | 1 |
| VAP 101 <br> (p. 263) | Foundatn Photogrphy | 3 |
| VAR 299 <br> (p. 263) | Second Year Review | 0 |

(p. 263)12

Select two courses from: (Satisfies CAP Arts) 6

| VAH 201 <br> (p. 263) | Survey of Art I |
| :---: | :---: |
| $\begin{aligned} & \text { VAH } 202 \\ & \text { (p. 263) } \end{aligned}$ | Survey of Art II |
| VAH 203 <br> (p. 263) | Survey of Art III |

Select two VAH courses (300/400 level) (May include CAP 6
Components)
Select Visual arts courses 12

## Breadth

| VAR 100 | Vis Arts Foundatn | 1 |
| :--- | ---: | ---: |
| (p. 263) |  |  |
| Total Hours to total at least | 132 |  |

## BFA Requirements

Humanities (Includes CAP Components)

## Bachelor of Fine Arts with a major in GRAPHIC Design (GDN) Minimum 129

## Hours



| VAD 360 <br> (p. 263) | Web Design | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { VAD } 411 \\ & \text { (p. 263) } \end{aligned}$ | Graphic Design I | 3 |
| VAD 412 <br> (p. 263) | Graphic Design II | 3 |
| VAD 415 <br> (p. 263) | Graphic Design III | 3 |
| $\begin{aligned} & \text { VAD } 498 \\ & \text { (p. 263) } \end{aligned}$ | Senior/Prof Seminar (With VAD 499, satisfies CAP Major Capstone) | 3 |
| VAD 499 <br> (p. 263) | Portfolio\&Paper-GD | 1 |
| VAF 104 (p. 263) | Foundation Drawing | 3 |
| VAF 112 <br> (p. 263) | Foundation 2-D Dsgn | 3 |
| VAF 117 <br> (p. 263) | Foundation 3-D Dsgn | 3 |
| $\begin{aligned} & \text { VAF } 204 \\ & \text { (p. 263) } \end{aligned}$ | Drawing II | 3 |
| $\begin{aligned} & \text { VAF } 216 \\ & \text { (p. 263) } \end{aligned}$ | Design and Color | 3 |
| $\begin{aligned} & \text { VAH } 383 \\ & \text { (p. 263) } \end{aligned}$ | Hst-Graphic Design | 3 |
| VAP 101 <br> (p. 263) | Foundatn Photogrphy | 3 |
| VAR 299 (p. 263) | Second Year Review | 0 |
| Select two courses from: (Satisfies CAP Arts) |  | 6 |
| VAH 201 <br> (p. 263) | Survey of Art I |  |
| VAH 202 <br> (p. 263) | Survey of Art II |  |
| VAH 203 <br> (p. 263) | Survey of Art III |  |
| Select one fine arts course from: |  | 3 |
| VAF 226 <br> (p. 263) | Painting I |  |
| VAF 253 <br> (p. 263) | Printmaking I |  |
| $\begin{aligned} & \text { VAF } 240 \\ & \text { (p. 263) } \end{aligned}$ | Ceramics I |  |
| VAF 242 <br> (p. 263) | Ceramics II: Wheel Throwing |  |
| $\begin{aligned} & \text { VAF } 232 \\ & \text { (p. 263) } \end{aligned}$ | Sculpture I |  |
| $\begin{aligned} & \text { VAF } 370 \\ & \text { (p. 263) } \end{aligned}$ | Illustration I |  |
| Select one VAH course (300/400 level) (May include CAP Advanced Historical Studies) |  |  |
| Select one VAP course |  | 3 |
| Select Visual Arts courses (May include CAP Components) |  | 12 |
| Select two marketing or communication courses |  | 6 |


\section*{Breadth <br> | VAR 100 | Vis Arts Foundatn |
| :--- | ---: |
| (p. 263) | 1 |
| Total Hours to total at least | 129 | <br> Bachelor of Fine Arts with a major in Photography (pho) Minimum 131 Hours}



| or VAF 216 <br> (p. 263) | Design and Color |  |
| :---: | :---: | :---: |
| VAH 382 <br> (p. 263) | Hst of Photogrphy I (Satisfies CAP Advanced Historical Studies) | 3 |
| VAH 480 <br> (p. 263) | 20th Century Art I | 3 |
| VAH 482 <br> (p. 263) | Hst-Photogrphy II | 3 |
| VAP 101 (p. 263) | Foundatn Photogrphy (Satisfies CAP Arts) | 3 |
| VAP 201 <br> (p. 263) | Photography II | 3 |
| VAP 240 <br> (p. 263) | Digital Processes I | 3 |
| VAP 302 <br> (p. 263) | Color Photography I | 3 |
| VAP 410 <br> (p. 263) | Advanced Photography | 3 |
| VAP 498 <br> (p. 263) | Senior/Prof Seminar (With VAP 499, satisfies CAP Major Capstone) | 3 |
| VAP 499 <br> (p. 263) | Portfolio\&Paper:VAP | 1 |
| VAR 299 <br> (p. 263) | Second Year Review | 0 |
| Select two courses from: |  | 6 |
| VAP 320 <br> (p. 263) | Studio Practice I |  |
| $\begin{aligned} & \text { VAP } 330 \\ & \text { (p. 263) } \end{aligned}$ | Alternative Photo I |  |
| $\begin{aligned} & \text { VAP } 340 \\ & \text { (p. 263) } \end{aligned}$ | Digital Processes II |  |
| Select two courses from: |  | 6 |
| VAH 201 <br> (p. 263) | Survey of Art I |  |
| VAH 202 <br> (p. 263) | Survey of Art II |  |
| VAH 203 <br> (p. 263) | Survey of Art III |  |
| Select three V | courses (300/400 level) | 9 |
| Select Visual | courses (May include CAP Components) | 14 |
| Breadth |  |  |
| VAR 100 (p. 263) | Vis Arts Foundatn | 1 |
| Total Hours to | al at least | 131 |
| Minor in Art History (hoa) |  |  |
| Art History |  |  |
| Select two courses from: |  | 6 |
| $\begin{aligned} & \text { VAH } 201 \\ & \text { (p. 263) } \end{aligned}$ | Survey of Art I |  |
| VAH 202 <br> (p. 263) | Survey of Art II |  |
| VAH 203 <br> (p. 263) | Survey of Art III |  |


| Select four VAH courses (300/400 level) | 12 |
| :--- | :--- |
| Total Hours | 18 |

## Minor in Fine Arts (art)

| Fine Arts |  |  |
| :--- | :--- | ---: |
| VAF 104 <br> (p. 263) | Foundation Drawing |  |
| VAF 112 <br> (p. 263) | Foundation 2-D Dsgn |  |
| VAH 201 <br> (p. 263) | Survey of Art I | 3 |
| or VAH 202 | Survey of Art II |  |
| (p. 263) |  |  |
| or VAH 203 <br> (p. 263) | Survey of Art III |  |
| Select four VAF courses | 12 |  |
| Total Hours |  | 21 |

## Minor in GRAPHIC Design (GDN)

## Graphic Design

| VAD 220 | Design Processes I | 3 |
| :--- | :--- | :---: |
| (p. 263) <br> VAD 240 <br> (p. 263) | Form and Concept | 3 |
| VAD 245 <br> (p. 263) | Typography I | 3 |
| VAD 320 <br> (p. 263) | Design Processes II | 3 |
| VAF 112 <br> (p. 263) | Foundation 2-D Dsgn |  |
| VAF 216 <br> (p. 263) | Design and Color | 3 |
| VAH 383 <br> (p. 263) | Hst-Graphic Design | 3 |
| Select one course from: | 3 |  |


| Select one course from: |  |
| :--- | :--- |
| VAD 318 | Grph Dsn-3 Dimensns |
| (p. 263) |  |
| VAD 345 | Typography II |
| (p. 263) |  |
| VAD 360 | Web Design |
| (p. 263) |  |
| VAD 395 | Advertising Design |
| (p. 263) |  |
| VAD 411 | Graphic Design I |
| (p. 263) |  |

Total Hours

## Minor in Photography (pho)

## Photography

| VAH 382 | Hst of Photogrphy I | 3 |
| :--- | :--- | :--- |
| (p. 263) |  | 3 |
| VAP 101 Foundatn Photogrphy | 3 |  |


| $\begin{array}{ll}\text { VAP } 201 & \text { Photography II } \\ \text { (p. 263) }\end{array}$ | 3 |
| :---: | :---: |
| VAP 240 (p. 263) | 3 |
| Select three VAP courses (300/400 level) | 9 |
| Total Hours | 21 |
| Minor in Visual Arts (var) |  |

Visual Arts
VAD 215 Computr Appl-Desgn 2
(p. 263)
or VAD 218 Computr Appl-Illust
(p. 263)

VAF 104 Foundation Drawing 3
(p. 263)

VAF 112 Foundation 2-D Dsgn 3
(p. 263)

VAH 201 Survey of Art I 3
(p. 263)
or VAH 202 Survey of Art II
(p. 263)
or VAH 203 Survey of Art III
(p. 263)

VAP 101 Foundatn Photogrphy 3
(p. 263)

| Select two VAD, VAF, VAP and/or VAR courses | 6 |
| :--- | ---: |
| Total Hours | 20 |

## Visual Arts-Art Education Courses

VAE 101. Early Childhood Art Education. 2 Hours
Acquaints students, especially those seeking Early Childhood Licensure, with the principles and concepts of art and with the various materials and techniques used in artistic expression. Open to all students. Studio fee.
VAE 231. Introduction to Art Education. 2 Hours
An introduction to the pedagogical, philosophical, and psychological aspects of teaching the arts. Topics will include: technology, national and state standards, history, learners with special needs, reading in the arts, and professional associations. Prerequisite(s): EDT 110, EDT 110L. Corequisite(s): Field experience.

## VAE 232. Integrating the Arts: Visual Arts. 3 Hours

Developing knowledge, skills values and attitudes in visual arts for the purpose of integration into classrooms for middle childhood and the adolescent learner. Prerequisite(s): EDT 110, EDT 110L.

VAE 383. Foundation of Art Education. 3 Hours
Introduction to the philosophy, history, and theory of teaching art to prekindergarten through grade eight students with varied needs and abilities. Art education majors only or permission. Prerequisite(s): EDT 110, EDT 110L, EDT 207, EDT 207L; permission of instructor and department chairperson. Corequisite(s): Field experience.

## VAE 483. Teaching Visual Arts. 3 Hours

Study of curriculum, planning, theory, and practice for teaching visual arts to students grades seven through twelve. Art Education majors only. Prerequisite(s): EDT 110, EDT 110L, EDT 207, EDT 207L, EDT 208; VAE 231, VAE 383; permission of instructor and department chairperson. Corequisite(s): EDT 305, EDT 340, EDT 340L, EDT 459.

## VAE 483W. Elementary \& Secondary School Art. 3 Hours

Workshop to give the student of elementary and secondary education new approaches to teaching studio arts, art criticism, art history, and aesthetics.

## VAE 490. Special Problems. 1-6 Hours

Course for advanced individual work in art education. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours. .

## Visual Arts-Art History Courses

VAH 101. Introduction to the Visual Arts. 3 Hours
Thematically-based, non-chronological introduction that covers the fundamental and varied roles that the visual arts have played and continue to play in the human experience. Open to all students.

## VAH 201. Survey of Art I. 3 Hours

Survey of Western art from pre-history through the mid-eighteenth to twenty-first centuries.

## VAH 202. Survey of Art II. 3 Hours

Survey of Western art from the late medieval period through the Baroque period.

## VAH 203. Survey of Art III. 3 Hours

Survey of Western art from the eighteenth through the twentieth centuries. Open to all students. .

## VAH 320. Latin American Art. 3 Hours

Survey of Latin American art history from the 19th century to the present.

## VAH 330. Arts of Asia. 3 Hours

Survey of Asian art history from circa 1500 BC to the present. Open to all students.

## VAH 350. Western Architecture. 3 Hours

Introduction to the history, theory, and practice of Western architecture from pre-history through the contemporary period. Open to all students.

## VAH 360. Art History \& Feminism. 3 Hours

Introduction to feminist approaches to art history and women artists from the medieval period to the present. Open to all students.

## VAH 370. Nineteenth Century Art I. 3 Hours

Introduction to American art and architecture from the colonial period to the present. Open to all students.

## VAH 382. History of Photography II. 3 Hours

History of the cultural, social, and aesthetic roles of photography from the camera obscura to 1945. Emphasis on the changing practice and perception of the medium. Open to all students.
VAH 383. History of Graphic Desing. 3 Hours
Study of the significant developments, movements, and figures in the history of graphic design with an emphasis on the twentieth century. Open to all students.

## VAH 450. Italian Renaissance Art. 3 Hours

Introduction to the painting, sculpture, and architecture of Italy between c. 1300 and c. 1550. Prerequisite(s): VAH 202 or permission of instructor and department chairperson.

## VAH 460. Baraque Art. 3 Hours

Study of the major painters, sculptors, and architects of the seventeenth century. Prerequisite(s): VAH 202 or permission of instructor and department chairperson.

## VAH 470. Nineteenth Century Art I. 3 Hours

Study of the major artists and movements in European art from NeoClassicism to the beginnings of Realism. Prerequisite(s): VAH 203 or permission of instructor and department chairperson.

## VAH 471. Nineteenth Century Art II. 3 Hours

Study of the major artists and movements in European art from Realism through Art Nouveau. Prerequisite(s): VAH 470 or permission of instructor and department chairperson.

## VAH 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topc may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAH 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## VAH 480. Twentieth Century Art I. 3 Hours

Study of the major movements and artists in the painting, sculpture, architecture, and other media from 1900 to 1945 . Open to all students.

## VAH 482. History of Photography II. 3 Hours

The history of photography from 1945 to the present. Examines the medium as a potent force in modern and contemporary culture and as a constantly evolving form of art and tool of communication. Open to all students.

## VAH 483. Twentieth Century Art II. 3 Hours

Study of the major movements and artists in painting, sculpture, architecture, and other media from 1945 to the present. Open to all students.

## VAH 485. Art History Seminar. 3 Hours

Seminar and capstone reading and research course concentrating on one art historical topic for detailed analysis. May be repeated as topics change. Prerequisite(s): Permission of instructor.

## VAH 490. Special Problems. 1-5 Hours

Advanced, independent study with faculty direction in art history. Prerequisite(s): One art history course or permission of instructor and department chairperson.

## Visual Arts-Fine Arts Courses

## VAF 104. Foundation Drawing. 3 Hours

Introduction to basic visual concepts, various drawing media, and approaches to experimental technique. Emphasis on perspective, perceptual awareness, volume in space, and expressive freedom.

## VAF 112. Foundation 2-D Design. 3 Hours

Study of the underlying elements and principles of design as they are used in two-dimensional composition and the creation of illusionistic three-dimensional space. .

## VAF 117. Foundation 3-D Design. 3 Hours

Introduction to basic principles and practices of design in three dimensions. Emphasis on current theory and construction techniques using a variety of media and methods.

## VAF 203. Drawing thru Process. 3 Hours

An investigation and examination of the drawing process, of mark making, and experimental practices. An emphasis will be placed on contemporary, conceptual, and creative directions in drawing. Students are exposed to and challenged by a series of studio and researchbased problems that test the limitations and hidden opportunities within established drawing habits and conventional practices.

## VAF 204. Drawing II. 3 Hours

Emphasis on figure drawing with work from the nude model and the skeleton. Study of proportion, rendering volume, and developing expressive drawing skills in a variety of drawing media. Prerequisite(s): VAF 104.

## VAF 216. Design \& Color. 3 Hours

The study of color based on historical and contemporary color theories and the use of color in expressing and integrating design concepts. Prerequisite(s): VAF 112 or permission of department chairperson.

## VAF 225. Painting for Non-Majors. 3 Hours

Introduction to the history, fundamental principles, materials, tools, and methods of painting, emphasizing the spatial and expressive qualities of color, composition, and pictorial design. Not open to majors or minors in the Department of Visual Arts.

## VAF 226. Painting I. 3 Hours

Introduction to basic painting principles, techniques, and materials; still life, landscape, figure, and abstraction. Prerequisite(s): (VAF 104, VAF 112, VAF 216) or permission of department chairperson.

## VAF 228. Watercolor I. 3 Hours

Principles and techniques of transparent watercolor. Emphasis on technical mastery. Prerequisite(s): (VAF 104, VAF 112, VAF 216) or permission of department chairperson.

## VAF 232. Sculpture I. 3 Hours

Consideration of forms as a means of developing an understanding of mass, shape, and control of medium. The use of various materials such as wood, plaster, and clay, with emphasis on integrating material with personal expression.

## VAF 240. Ceramics I. 3 Hours

Introduction to basic methods of working in clay using coil and slab techniques.
VAF 242. Ceramics II. 3 Hours
Introduction to basic methods of working clay using the wheel.

## VAF 253. Printmaking I. 3 Hours

Introduction to the traditional printmaking methods of woodcut and intaglio. Instruction in edition-printing techniques and curating of prints. . Prerequisite(s): (VAF 104, VAF 112) or permission of department chairperson.

## VAF 304. Drawing III. 3 Hours

Continuation of work done in VAF 204 with an emphasis on the development of finished figure drawings. Study of anatomy and the rendering of convincing volumes in space. Prerequisite(s): VAF 204.
VAF 325. Figure Painting. 3 Hours
Painting from the model with a variety of media. Traditional and contemporary approaches to the figure. Prerequisite(s): ((VAF 204 or VAF 304), VAF 226) or permission of department chairperson.

## VAF 326. Painting II. 3 Hours

Painting with oils or acrylics; continuing study of the principles and techniques of painting, with emphasis on personal expression and experimentation. Prerequisite(s): (VAF 226 or VAF 228) or permission of department chairperson.

## VAF 328. Watercolor II. 3 Hours

Continuing investigation of watercolor techniques, both traditional and experimental. Still life, figure, landscape, and abstraction. Prerequisite(s): VAF 228 or permission of department chairperson.

## VAF 332. Scripture II. 3 Hours

Continued exploration of three-dimensional concepts and materials, concentrating on wood, stone, and metal. Prerequisite(s): VAF 232 or permission of department chairperson.

## VAF 342. Ceramics III. 3 Hours

Expanded exploration of skills, concepts, and processes introduced in VAF 240 hand building or VAF 242 wheel thrown ceramic forms, with emphasis on building techniques, materials, glazing, and firing processes. Prerequisite(s): (VAF 240 or 242) or permission of instructor.

## VAF 353. Printmaking II. 3 Hours

Advanced work in woodcut, monoprint and intaglio, including acrylic process and color etchings. Prerequisite(s): VAF 253.

## VAF 370. Illustration I. 3 Hours

Attention to conceptual, visual, and technical development. Exploration of media and techniques employed by the illustrator in creating images for printed communication. Prerequisite(s): VAF 104, VAF 204.

## VAF 380. Illustration II. 3 Hours

Interpretation and representation of concepts, products, or stories for magazines, books, newspapers, and advertising. Continued technical development with a variety of materials, media, and techniques.
Prerequisite(s): VAF 370.

## VAF 404. Drawing IV. 3 Hours

Observational and expressive drawing. Continued work with the figure in combination with a variety of other subject matter. Emphasis on the development of a body of work with a related idea.. Prerequisite(s): (VAF 204, VAF 304) or permission of department chairperson.

## VAF 426. Painting III. 3 Hours

Directed advanced studio problems; contemporary issues in painting. Repeatable up to nine semester hours. Studio fee. Prerequisite(s): (VAF 325 or VAF 326) or permission of department chairperson.

## VAF 442. Ceramics IV. 3 Hours

Investigation of advanced studio topics within ceramics. Problems structured to encourage technical, conceptual, and aesthetic exploration leading to the creation of a cohesive body of work. May be repeated as topics change. Prerequisite(s): VAF 342 or permission of instructor.

## VAF 453. Printmaking III. 3 Hours

Advanced work in printmaking processes with an emphasis on the production of multi-color editions. Prerequisite(s): VAF 353.

## VAF 470. Illustration III. 3 Hours

Focus on developing an individual point of view and illustration style. Prerequisite(s): VAF 380.

## VAF 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the departmental chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAF 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## VAF 490. Special Problems. 1-5 Hours

Course for advanced individual work in fine arts. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours.

## VAF 498. Senior/Professional Seminar- Fine Arts. 3 Hours

Capstone course required of all B.A. and B.F.A. fine arts and art education (E11) majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): Junior standing.

## VAF 499. Portfolio \& Paper- Fine Arts. 1 Hour

Completion and presentation of undergraduate portfolio and paper, to be reviewed by faculty and peers. Faculty approval of portfolio and paper is required for graduation. Prerequisite(s): VAF 498 or permission of department chairperson.

## Visual Arts-Photography Courses

## VAP 100. Darkroom Photography. 3 Hours

Emphasis on learning and exploring the visual language of lens-based photographic imagery through a series of technical and creative darkroom assignments. Black and white 35 mm film, paper, and related chemical processes will be utilized in the creation of photographs. Students gain an understanding of technical and creative control as well as conceptual practices associated with the medium. Course does not fulfill Visual Arts degree requirements.

## VAP 101. Foundation Photography. 3 Hours

Fundamentals of black-and-white still photography, including camera function, exposure, film processing, and printing, with an emphasis on learning the visual language of photographic imagery through a series of creative assignments.

## VAP 200. Digital Photography for Non-Majors. 3 Hours

An emphasis on learning and exploring the visual language of lens-based digital photographic imagery through a series of technical and creative digital assignments. Using various types of digital capture devices, some examples are cell phones, consumer grade digital cameras and scanners. Macintosh computers, and Adobe Photoshop software will be utilized in the creation of photographs. Students gain an understanding of technical and creative control as well as conceptual practices associated with the digital photographic medium. Course does not fulfill Visual Arts degree requirements.

## VAP 201. Photography II. 3 Hours

Variety of challenging projects develop increased technical competence, greater visual awareness, personal expression, and sustained creative growth. Prerequisite(s): VAP 101 or equivalent.

## VAP 240. Digital Processes I. 3 Hours

Introduction to the practice, theory, aesthetics, and ethics of digital photography, including direct capture, scanning, enhancement, compositing, manipulation, and high-quality printing. Prerequisite(s): VAP 101 or permission of department chairperson.

## VAP 302. Color Photography I. 3 Hours

Introduction to techniques and aesthetics of color photography. Students utilize color sensitive films, papers, and digital technologies in the exploration of color photography. Prerequisite(s): (VAP 101, VAP 240) or permission of department chairperson.

## VAP 320. Studio Practice I. 3 Hours

Extensive use of large format camera, studio grip equipment, tungsten and electronic flash lighting techniques; still-life and portrait photography in a studio environment. Prerequisite(s): VAP 201.

## VAP 321. Studio Practice II. 3 Hours

Emphasis on the production of a professional-quality portfolio which will demonstrate advanced knowledge of the studio and image production. Prerequisite(s): VAP 320.

## VAP 330. Alternative Photography I. 3 Hours

Introduction to specialized image production utilizing silver and non-silver photographic processes. Emphasis on technical and aesthetic aspects of alternative photographic practice. Prerequisite(s): VAP 101.

## VAP 331. Alternative Photography I. 3 Hours

Continuing work with alternative silver and non-silver processes. Emphasis on completion of an artist book or installation which demonstrates advanced technical command and aesthetic understanding of the processes employed. Prerequisite(s): VAP 330.

## VAP 340. Digital Processes II. 3 Hours

Expands on the practice and theory of digital photography and computer imaging. Emphasis is placed on the creation of a cohesive portfolio of digital artwork through the exploration of advanced digital methodologies and concepts. The course will also focus on the different modes of dissemination relevant to digital images. Prerequisite(s): VAP 240.

## VAP 350. View Camera. 3 Hours

Extensive experience with the view camera, examination of refined techniques, various applications, and concepts of large format photography. Prerequisite(s): VAP 201.

## VAP 402. Color Photography II. 3 Hours

Continuation of color printing from negatives; completion of individual projects which will demonstrate an advanced understanding of the techniques and aesthetics peculiar to color photography. Prerequisite(s): VAP 302.

## VAP 410. Advanced Photography. 3 Hours

Students with a substantial commitment to photography and with demonstrated technical skills work on individual projects and participate in group critiques and discussions. Prerequisite(s): VAH 382 or VAH 482; VAP 201, VAP 302.

## VAP 420. Photojournalism. 3 Hours

Variety of ways of using photography as documentation, narrative, and propaganda. Editing of work, layout, and image-text relationships. Personal photographic essay required. Prerequisite(s): VAP 201.

## VAP 430. Professional Photographic Applications. 3 Hours

Problem-solving associated with professional photography; may include commercial, editorial, industrial, architectural, and illustrative photographic work both in the studio and on location. Prerequisite(s): VAP 320 or permission of department chairperson.

## VAP 450. Photography Internship. 1-3 Hours

Practical applications of photographic skills. Opportunities for advanced development and practical experience in professional working environments. Repeatable up to six semester hours for B.F.A. students. Prerequisite(s): Permission of department chairperson.

## VAP 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the Univeristy Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAP 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## VAP 490. Special Problems in Photography. 1-5 Hours

Series of assignments to guide independent study in photography, formulated to meet individual needs of the student. Prerequisite(s): VAP 201; permission of department chairperson.

## VAP 498. Senior/Professional Seminar- Photography. 3 Hours

Capstone course required of all B.A. and B.F.A. photography majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): (VAP 410; senior standing) or permission of department chairperson.

## VAP 499. Portfolio and Paper. 1 Hour

Completion and presentation of an undergraduate portfolio and a comprehensive paper that surveys the student's undergraduate career in the major and also serves as the foundation for a formal, public presentation that is reviewed by faculty and peers. Faculty approval of the portfolio and the paper is required for graduation. Prerequisite(s): VAP 498 or permission of department chairperson.

## Visual Arts Courses

## VAR 100. Visual Arts Foundation. 1 Hour

Defines and examines the process of beginning a program of education in the visual arts within the larger context of the College of Arts and Sciences and the University. Integrates pragmatic and conceptual issues critical to liberal learning for visual arts students.

## VAR 210. Visual Journal. 3 Hours

Students document and interpret their experience of a given site through the creation of unique journals. They create, collect, edit, and juxtapose visual materials in combination with written commentary and reflections.

## VAR 220. Visual Resources. 3 Hours

Students study a wide variety of visual elements, including many forms of visual communication as well as architecture, public spaces, and museums, in order to understand ways in which art and design play key roles in defining the unique cultural environment of a given site.

## VAR 299. Second Year Review. 0 Hours

Requires successful completion of Visual Arts Second Year Review. Eligibility for the review is determined by the department and is based upon a student's progress within the major. Visual Arts Scholarship recipients complete this course during their second year in the major. The review is based upon prior Visual Arts coursework completed and in progress at the time of the review. Required for all Visual Arts majors.
VAR 345. Computer Modeling \& Animation I. 3 Hours
Introduction to history, theory, and practice of three-dimensional computer modeling and animation for video, computer, and print media. Visualization, Cartesian space, simple polygonal modeling, surface rendering, and animation techniques will be explored.

## VAR 440. Computer Modeling \& Animation II. 3 Hours

Detailed study of spline-based modeling, surface rendering and mapping, editing complex animation sequences, motion control, and other topics. Prerequisite(s): VAR 345.

## VAR 445. Computer Modeling \& Animation III. 3 Hours

Individual projects in conceptualization and production of animated sequence from storyboard to final presentation. Prerequisite(s): VAR 440.

## VAR 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAR 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons.
Prerequisite(s): Approved 477; approval of University Honors Program.

## VAR 490. Special Problems. 1-5 Hours

Advanced, independent study with faculty direction in a visual arts subject or topic that is not covered in existing, discipline-specific courses. Permission.

## VAR 495. Senior Project Seminar. 1 Hour

The first in a sequence of two capstone courses. To be taken in the first semester of the senior year. Required for all Bachelor of Arts with a major in Visual Arts degrees. Students select a faculty mentor committee and work with that committee to establish a capstone project topic, goals, outcomes, and timeline associated with the project. Prerequisite(s): Senior standing. VAR majors only or permission of department chairperson.

## VAR 496. Project, Presentation \& Paper. 3 Hours

The second of two capstone courses leading to graduation. To be taken in the second semester of the senior year. Students complete a senior project and paper, and give a public presentation regarding the project to be reviewed by faculty and peers. Faculty approval of project and paper is required for graduation. Prerequisite(s): VAR 495 or permission of department chairperson.

## Visual Arts-Graphic Desgn Courses

VAD 211. Fundamentals of Visual Communication Design. 3 Hours Course for non-majors in the basics of design for communication. Attention to page layout, typography, image, graphic style, and information delivery.

## VAD 215. Computer Applications- Design. 2 Hours

An introduction to page design software programs and their use in the design process. Prerequisite(s): VAR 200.
VAD 218. Computer Applications- Illustration. 2 Hours
An introduction to drawing and paint software programs and their use in illustration. Prerequisite(s): VAR 200.

## VAD 220. Design Processes I. 3 Hours

Introduction to the processes of graphic design, specifically computer applications, equipment, and concepts as related to print and electronic based graphic design. Additionally, students engage in a survey of materials, assembly strategies, and various vehicles for the designed message. Prerequisite(s): VAF 112.

## VAD 240. Form \& Concept. 3 Hours

Exploration of visual form as means to convey content and meaning. Students enlist principles from art and design foundation courses within the context of graphic design. Design methodologies are introduced and explored, while process and hand skills are stressed. Prerequisite(s): VAF 112, VAF 216.

## VAD 245. Typography I. 3 Hours

Investigation of the history, tradition, discipline, and function of typography as related to visual and verbal communication. Technical, formal, and semantic aspects are explored. Structure, space, and sequence, critical to the typographic message, are stressed. Prerequisite(s): VAD 220, VAD 240.

## VAD 307. Drawing for Graphic Design. 2 Hours

Exploration of materials, procedures, and drawing techniques for design presentations. Prerequisite(s): VAF 104.

## VAD 310. Visual Form. 3 Hours

Exploration of the use of the computer as tool and medium for the creation and production of image and illustration for print and electronic graphic design. Prerequisite(s): VAD 220, VAD 240.

## VAD 312. Visual Form. 3 Hours

Investigation of the perceptual and psychological effect of the visual elements-line, shape, value, volume, texture, and color-in visual communication. Exploration of word and image relationships.
VAD 318. Graphic Design for Three Dimensions. 3 Hours
Application of graphic design principles to packaging, product, exhibition, and environmental design. Prerequisite(s): VAD 240, VAD 245; VAF 117.

## VAD 320. Design Processes II. 3 Hours

Advanced exploration into the use of computer technology as means and medium for the implementation, production, and presentation of graphic design. Print design and production, as well as commercial printing prepress are emphasized with additional attention given to production for electronic design vehicles. Prerequisite(s): VAD 220, VAD 240, VAD 245.

VAD 321. Computer Aided Illustrations. 3 Hours
An exploration of the use of the computer as both a tool and a medium for the creation and production of illustrations.

## VAD 344. Design for Multimedia I. 3 Hours

An introduction to the design process, including visual prinicples, aesthetic issues, and diverse applications for multimedia and interactive electronic media. Emphasis is placed on the visual organization of information in these environments.

## VAD 345. Typography II. 3 Hours

The advanced study of typographic design. Attention to the aesthetic and informational qualities of type in print and electronic communication. Prerequisite(s): VAD 245.

## VAD 351. Motion Design. 3 Hours

Exploration of the generation and application of motion in visual communication. This course builds on graphic design form, methods, technique, and principles to generate dynamic messaging using type, sound, image, and animation. While the computer and appropriate applications are primary tools, hand generated methods for concept and storyboarding are stressed as well. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

## VAD 355. Interaction Design. 3 Hours

Investigation of the use of interactivity as applied to the digital and analog landscape. Focus on the design of richly interactive interfaces for current and emerging media (computers, mobile, touch etc.). While some emphasis is on the development and implementation of design vehicles, decided attention is paid to concept and visual effectiveness. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

## VAD 360. Web Design. 3 Hours

Investigation of the processes of web design, including concept, information architecture, navigation, interface, and standard languages and technologies for the delivery of content and information. Organization, aesthetics, and user experience are discussed and explored. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

## VAD 395. Advertising Design. 3 Hours

Emphasis on print advertising, its creation and presentation. Concept development and attention to advertising layouts that carry motivating images and messages to consumers about products, services, or ideas.

## VAD 411. Graphic Design I. 3 Hours

Development of methodologies utilized for the purpose of generating concepts and effective communication within the context of graphic design. Attention is given to pragmatic and semantic relationships between elements such as typography, image, space, and color. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

## VAD 412. Graphic Design II. 3 Hours

Development of methodologies utilized for the purpose of generating concepts and effective communication within the context of graphic design. Attention is given to pragmatic and semantic relationships between elements such as typography, image, space, and color. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

## VAD 414. Trademark Design. 3 Hours

Advanced study of marks, logos, and symbols as communication and identification elements. Emphasis on conceiving design marks of identity for small businesses, corporations, institutions, products, and/or services. Prerequisite(s): VAD 411.

## VAD 415. Graphic Design III. 3 Hours

The study and design of identification and image systems for products, organizations, institutions, or corporations. Emphasis on continuity in the application of visual communication factors. Prerequisite(s): VAD 412 or permission of department chairperson.

## VAD 444. Design for Multimedia II. 3 Hours

Advanced level design for multimedia and interactive electronic media. Emphasis is placed on actual or simulated client-based projects.

## VAD 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consulatation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## VAD 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved VAD 477; approval of University Honors Program.

## VAD 480. Design Internship. 1-3 Hours

Opportunities for practical experience in professional working environments. Repeatable up to nine semester hours. Prerequisite(s): Permission of department chairperson.

## VAD 490. Special Problems. 1-3 Hours

A course for advanced individual work in design. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours

## VAD 498. Senior/Professional Seminar. 3 Hours

Capstone course required of all B.F.A. graphic design majors, to be taken in the fall term of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): Senior standing or permission of department chairperson.

## VAD 499. Portfolio and Paper. 1 Hour

Completion and presentation of undergraduate portfolio and paper, to be reviewed by faculty, peers, and professionals in a public forum. Faculty approval of portfolio and paper is required for graduation. Prerequisite(s): VAD 498 or permission of department chairperson.

## Women's and Gender Studies

Major:

- Bachelor of Arts, Women's and Gender Studies (p. 276)

Minor:

- Women's and Gender Studies (p. 278)

Women's and gender studies places the experiences and perspectives of women at the center of analysis and also considers how gender intersects with other factors, such as race and class, to shape all of our lives. Interdisciplinary in nature, and founded upon the integration
of theory and practice, critique and imagination, women's and gender studies brings approaches from other disciplines and fields into conversation with each other and with critical theories about gender and power to address and improve the lives of women and, by extension, of children and men. Inspired by both feminist and Marianist traditions, the Women's and Gender Studies Program at UD seeks to promote:

- Integration, collaboration, and personal engagement in learning
- The development and dissemination of critical thinking for social justice
- The appreciation and protection of human dignity and diversity
- Leadership through responsibility and service to community

Students majoring in women's and gender studies must complete thirtyfour to thirty-nine semester hours, including at least ten semester hours in four core WGS courses and twenty-four semester hours of upper-division courses offered by other departments. For these additional twenty-four semester hours, students must complete nine semester hours in one area of concentration, six semester hours in each of two additional areas, and three semester hours in a fourth area.

The major also has a cultural diversity requirement of six semester hours. (These hours may be from courses that are also used to fulfill the area requirements.) Of the six hours, three must be from a course that emphasizes race, and/or that takes a multicultural approach, within a U.S or European context; the other three must be from a course that focuses on a non-U.S./European context or that takes a comparative international approach.

Courses taken for the major may also count toward completion of the Liberal Studies Curriculum.

Students minoring in women's and gender studies must complete at least fifteen semester hours, including one interdisciplinary core course (WGS 150 (http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/ programsofstudy/womensandgenderstudies), WGS 310 (http:// catalog.udayton.edu/undergraduate/collegeofartsandsciences/ programsofstudy/womensandgenderstudies) or WGS 350 (http:// catalog.udayton.edu/undergraduate/collegeofartsandsciences/ programsofstudy/womensandgenderstudies)) and twelve hours in approved upper-division courses (300-level or above) from at least three different disciplines. Alternatively, minors may take two of the interdisciplinary core courses, and nine hours in approved upper-division courses from three different disciplines.

## Women's and Gender Studies Committee

Rebecca Whisnant (Philosophy), Director
Bennett (Religious Studies), Damasco (Roesch Library), DesAutels (Philosophy), Fleischmann (History), Hudson (Political Science), James (Philosophy), Laufer-Ukeles (Law), Leming (Sociology, Anthropology, and Social Work), Merithew (History), Picca (Sociology, Anthropology, and Social Work), Potter (English), Rismiller (Women's Center), Watters (Communication)

BACHELOR OF ARTS WITH A MAJOR IN WOMEN'S AND GENDER STUDIES (WGS) Minimum 124 Hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| $\begin{aligned} & \text { HST } 103 \\ & \text { (p. 276) } \end{aligned}$ | West and World |  | WGS 490 <br> (p. 276) | Senior Sem in WGS (Satisfies CAP Major Capstone) | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { REL } 103 \\ & \text { (p. 276) } \end{aligned}$ | Int Rel\&Theo Studies |  | First area courses: |  |  |
|  |  |  | Select nine sem | ster hours from one area below | 9 |
| $\begin{aligned} & \text { PHL } 103 \\ & \text { (p. 276) } \end{aligned}$ | Intro To Philosophy |  | Second area courses: |  |  |
|  |  |  | Select six semester hours from a second area belowThird area courses: |  | 6 |
| $\begin{aligned} & \text { ENG } 100 \\ & \text { (p. 276) } \end{aligned}$ | Writing Seminar I ${ }^{2}$ |  |  |  |  |
|  |  |  | Select six semester hours from a third area below |  | 6 |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 | Fourth area courses: ${ }^{3}$ |  |  |
| $\begin{aligned} & \text { ENG } 200 \\ & \text { (p. 276) } \end{aligned}$ | Writing Seminar II |  | Select three semester hours from the final area below |  | 3 |
| Oral Communication |  | 3 | Areas: ${ }^{4}$ |  |  |
| CMM 100 <br> (p. 276) | Princ of Oral Comm |  | Literature and Arts |  |  |
|  |  |  | CMS 415 <br> (p. 276) | Women \& Communication |  |
| Mathematics |  | 3 |  |  |  |
| Social Science |  | 3 | $\begin{aligned} & \text { ENG } 333 \\ & \text { (p. 276) } \end{aligned}$ | Images-Women in Lit |  |
| Arts |  | 3 |  |  |  |
| Natural Scienc |  | 7 | ENG 335 <br> (p. 276) | African Amer Lit |  |
| Crossing Boundaries |  | variable credit |  |  |  |
|  |  | $\begin{aligned} & \text { ENG } 336 \\ & \text { (p. 276) } \end{aligned}$ | Gender in Fiction |  |
| Faith Traditions |  |  |  | ENG 345 | Colonl\&Postcolnl Lit |  |
| Practical Ethical Action |  |  | (p. 276) |  |  |
| Inquiry |  |  | VAH 360 | Art History\&Feminsm |  |
| Integrative |  |  | (p. 276) |  |  |
| Advanced Study |  | variable credit | Philosophy and Religious Studies |  |  |
|  |  | PHL 307 | Philosophy and Women |  |  |
| Philosophy and/or Religious Studies |  |  |  | (p. 276) |  |
| Historical Studies |  |  |  | PHL 364 <br> (p. 276) | Race, Gender\&Phl |  |
| Diversity and Social Justice |  | 3 |  |  |  |
| Major Capstone |  | 0-3 | $\begin{aligned} & \text { REL } 471 \\ & \text { (p. 276) } \end{aligned}$ | Women and Religion |  |
| 1 Completed | th ASI 110 and ASI 120. |  | $\begin{aligned} & \text { REL } 472 \\ & (\mathrm{p.} .276) \end{aligned}$ | Ecology \& Religion |  |
| 2 Or ENG 100 | and ENG 100B, or ENG 200H, by placement. |  |  |  |  |
| 3 Completed | th ENG 200 H or ASI 120. |  | $\begin{aligned} & \text { REL } 474 \\ & \text { (p. 276) } \end{aligned}$ | Women-Global Church |  |
| Liberal Studies Curriculum |  |  | Social Sciences ${ }^{3}$ |  |  |
| Creative and Performing Arts (May include CAP Arts) |  | 3 | $\begin{aligned} & \text { ANT } 306 \\ & \text { (p. 276) } \end{aligned}$ | Culture and Power |  |
| L2 Proficiency (Proficiency in a language other than English) |  | 0-11 |  |  |  |
| Literature (Ma | clude CAP Components) | 3 | $\begin{aligned} & \text { HSS } 325 \\ & \text { (p. 276) } \end{aligned}$ | Women in Sport |  |
| Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) |  | 3 | $\begin{aligned} & \text { POL } 340 \\ & \text { (p. 276) } \end{aligned}$ | Gender\&Internatnl Rel |  |
| Natural Sciences (Satisfies CAP Natural Science) |  | 11 |  |  |  |
| Major Requirements |  | 12 | PSY 443 <br> (p. 276) | Psychology of Women |  |
|  |  | 34 | $\begin{aligned} & \text { PSY } 462 \\ & \text { (p. 276) } \end{aligned}$ | Human Sexuality |  |
| (May include CAP Components) |  |  |  |  |  |
| $\begin{aligned} & \text { WGS } 150 \\ & \text { (p. 276) } \end{aligned}$ | Intro Wm\&Gndr Stdies ${ }^{1,2}$ | 3 | $\begin{aligned} & \text { SOC } 322 \\ & \text { (p. 276) } \end{aligned}$ | Sex Roles \& Society |  |
| $\begin{aligned} & \text { or WGS } 350 \\ & \text { (p. 276) } \end{aligned}$ | Fem Social Change |  | $\begin{aligned} & \text { SOC } 330 \\ & \text { (p. 276) } \end{aligned}$ | Perspctves-Agng |  |
| WGS 310 <br> (p. 276) | Fem Thry \& Mthd | 3 | $\begin{aligned} & \text { SOC } 331 \\ & \text { (p. 276) } \end{aligned}$ | Marriage \& Family |  |
| WGS 390 <br> (p. 276) | Service Lrng in WGS | 1-3 | $\begin{aligned} & \text { SOC } 332 \\ & \text { (p. 276) } \end{aligned}$ | Sociology of Women |  |


| SOC 333 <br> (p. 276) | Soc of Sexualities |
| :--- | :--- |
| SOC 339 | Social Inequality |
| (p. 276) |  |
| SOC 432 <br> (p. 276) | Struct of Privlege |
| SWK 325 | Child Abuse |
| (p. 276) |  |
| SWK 327 | Parentng:Soc Welfare |
| (p. 276) |  |
| SWK 330 | Perspectives on Aging |
| (p. 276) |  |
| SWK 370 | Social Welfare Policy |
| (p. 276) |  |
| UDI 341 | Sexual Diversity |
| (p. 276) |  |

## Cultural Diversity Requirement ${ }^{5}$

| Select one U.S./Europe Multicultural course from: |  |
| :--- | :--- |
| ENG 335 | African Amer Lit |
| (p. 276) |  |
| HST 351 | Women Gender Am |
| (p. 276) |  |
| HST 353 | Hst-Wom in Eurp Soc |
| (p. 276)  <br> PHL 364 Race, Gender\&Phl <br> (p. 276)  <br> SOC 432 <br> (p. 276) Struct of Privlege |  |

Select one Global (non U.S./Europe) course from: 3
ANT 306 Culture and Power
(p. 276)

ENG 345 Colonl\&Postcolnl Lit
(p. 276)

HST 354 Hst-Women Mid East
(p. 276)

HST 356 Women in Third World
(p. 276)

POL 340 Gender\&Internatnl Rel
(p. 276)

REL 471 Women and Religion
(p. 276)

REL 474 Women-Global Church
(p. 276)

## Breadth

| ASI 150 | Intr to the Univ Exp | 1 |
| :--- | :--- | ---: |
| (p. 276) |  | 124 |

1 Restricted to students with no more than six semester hours applicable to a WGS major or minor. This course counts toward the WGS major only if taken before any other WGS core course.
2 A major who has taken WGS 150 (p. 276) may also take WGS 350 (p. 276) in lieu of one of the required disciplinary courses. WGS 350 (p. 276) will be counted toward the area requirement that most reflects the course's content during the relevant term.

3 In order to achieve some balance in approach, students must complete at least six semester hours each in both social sciences (anthropology, political science, psychology, sociology, and social work) and humanities (literature, arts, history, philosophy, and religious studies) courses. For this reason, social sciences must normally serve as the first, second, or third area, and not as the fourth.
4 Other courses may be counted toward the major, with approval of the program director, and depending on topic and content during a given semester.
5 This requirement may be satisfied with courses that are also used to fulfill the area requirements. Of the six semester hours, three must be from a course that emphasizes race, and/or that takes a multicultural approach, within a U.S. or European context; the other three must be from a course that focuses on a non-U.S./European context or that takes a comparative international approach.

## MINOR IN WOMEN'S AND GENDER STUDIES (WGS)

Women's and Gender Studies ${ }^{1}$
WGS 150 Intro Wm\&Gndr Stdies 3
(p. 276)
or WGS 310 Fem Thry \& Mthd
(p. 276)
or WGS 350 Fem Social Change
(p. 276)

Select twelve semester hours from at least three different academic 12
disciplines (300/400 level) ${ }^{2}$
Total Hours
1 Students who wish to minor in Women's and Gender Studies should contact the director of the Women's and Gender Studies Program.
2 A student may, alternatively, take two of the indicated WGS core courses (WGS 150 (http://catalog.udayton.edu/ undergraduate/collegeofartsandsciences/programsofstudy/ womensandgenderstudies), WGS 310 (http://catalog.udayton.edu/ undergraduate/collegeofartsandsciences/programsofstudy/ womensandgenderstudies), WGS 350 (http://catalog.udayton.edu/ undergraduate/collegeofartsandsciences/programsofstudy/ womensandgenderstudies)) and three upper-level courses from three different disciplines.

## Courses

WGS 150. Introduction to Women's \& Gender Studies. 3 Hours Introduction to history, methods, and key debates in Women's and Gender Studies. Intersectional (studying gender as it intersects with other social identity categories such as race, class, and sexuality), multior interdisciplinary (drawing from the arts, humanities, social sciences, and natural sciences), and multicultural in approach. Prerequisite(s): Restricted to students with no more than six semester hours applicable to a WGS major or minor.

## WGS 310. Feminist Theory \& Methodology. 3 Hours

Exploration of the intersections of feminist epistemology, methodology, politics, and ethics. Consideration and comparison of a range of theories about gender, power, and knowledge that have shaped the development of feminist and womanist thought, research, practice, and movement in the U.S. and in other parts of the world. Prerequisite(s): WGS 150 or six semester hours prior WGS credit.

## WGS 350. Feminist Social Change. 3 Hours

Exploration of the methods and priorities of feminist social change efforts in varying national, cultural, and/or religious contexts, including outside of the U.S. and Europe. Investigation of the nature, possibilities, and challenges of global/transnational feminist movement(s). Prerequisite(s): WGS 150 or six semester hours prior WGS credit.

WGS 380. Special Topics in Women's \& Gender Studies. 1-3 Hours Intensive examination of current thematic, theoretical, or methodological issues in the field of Women's and Gender Studies. Consult composite for topics. May be repeated as topic changes. Prerequisite(s): WGS 150 or WGS 310 or WGS 350 or six semester hours prior WGS credit.
WGS 390. Service Learning in Women's \& Gender Studies. 1-3 Hours
Individualized placements in community organizations that enable students to apply and enrich their formal studies by engaging in service work that addresses women's needs and/or advances social justice in relation to gender. May be done as an independent or group study under the direction of a WGS faculty member. May also be done in conjunction with another course. May be repeated up to a maximum of three semester hours. Prerequisite(s): WGS 150 or WGS 310 or WGS 350; permission of program director.

## WGS 477. Honors Thesis Project. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

## WGS 478. Honors Thesis Project. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477 and approval of University Honors Program.
WGS 480. Independent Study in Women's \& Gender Studies. 3 Hours
Individual investigations of special topics in the field of Women's and Gender Studies under faculty direction. May be repeated under special circumstances. No more than six semester hours of WGS 480 may count toward the major. Prerequisite(s): WGS 150 or WGS 310 or WGS 350; approval of program director.

WGS 490. Senior Seminar in Women's \& Gender Studies. 3 Hours Concentration on a particular topic or problem in Women's and Gender Studies, with focus on critical theories, methodologies, ethics and practices appropriate for advanced feminist research. Emphasis on integration (e.g. of feminist theory, methods, and practice) and interdisciplinarity. May require students either to work collaboratively on a single research project or to apply certain theories or methods central to the seminar in their exploration of individual projects. May be repeated as topics change. Prerequisite(s): WGS 150 or WGS 350, WGS 310.

# Undergraduate School of Business Administration 

Paul Bobrowski, Dean

Elizabeth Gustafson, Associate Dean
Harvey Enns, Associate Dean

## Mission

The School of Business Administration is a learning community committed in the Catholic and Marianist tradition to educating the whole person and to connecting learning and scholarship with leadership and service in an innovative business curriculum designed to prepare ethical leaders for successful careers in a global business environment.

Through the curriculum and co-curriculum of the School, students develop the ability to integrate learning across disciplines, apply the theory they are learning to real business problems, and lead with ethics and integrity. Success in business requires an understanding of human values and the society in which business operates as well as mastery of the various areas of business. For this reason, the undergraduate curriculum includes three areas of coursework:

- A foundation in the liberal arts (which includes the University Common Academic Program)
- A firm grounding in the common body of business knowledge (core business requirements)
- Specialization in a business major


## Curriculum Overview

The undergraduate curriculum for students earning a BS in Business Administration includes three areas of coursework:

- A foundation in the liberal arts (which includes the University Common Academic Program)
- A firm grounding in the common body of business knowledge (core business requirements)
- Specialization in a business major

All business students follow essentially the same curriculum during their first and second years, regardless of major. This curriculum consists of a common set of liberal arts and core business requirements with the first year mostly devoted to liberal arts requirements.

In the third and fourth years, all business students also take a common set of upper level liberal arts and core business requirements in addition to courses to complete their chosen major.

For information on majors and minors offered by the School of Business Administration and their requirements, visit the Programs of Study link.

Each major requires several hours of general electives, typically 0-12 hours depending upon the major and choice of courses in the Common Academic Program. Students often use these general electives to support an additional major or minor.

Students need 124 hours to graduate, with 54 hours at the upper level (300-400). At least 75 percent of the required courses in business disciplines must be taken at the University of Dayton.

Students should consult with their academic advisor in the SBA Center for Academic Success in addition to tracking their own progress towards degree requirements.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$
ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## SBA Core Curriculum

| ACC 207 <br> (p. 280) | Intro-Financial Acc | 3 |
| :--- | :--- | :---: |
| ACC 208 <br> (p. 280) | Intro-Managerial Acc | 3 |
| BAI 150 <br> (p. 280) | Bus Educ Planning | 1 |
| BAI 103L <br> (p. 280) | Bus Computing Lab | 1 |
| BAI 151 <br> (p. 280) | Bus Integratn Exp | 1 |
| DSC 210 <br> (p. 280) | Stats For Bus I | 3 |
| DSC 211 <br> (p. 280) | Stats For Bus II | 3 |


| $\begin{aligned} & \text { ECO } 203 \\ & \text { (p. 280) } \end{aligned}$ | Prin of Microecon (Satisfies CAP Social Science) | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { ECO } 204 \\ & \text { (p. 280) } \end{aligned}$ | Prin of Macroecon | 3 |
| ENG 370 | Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) | 3 |
| or ENG 371 <br> (p. 280) | Technical Commnicatn |  |
| or ENG 372 <br> (p. 280) | Business Commicatn |  |
| FIN 301 (p. 280) | Intro to Financial Mgt | 3 |
| $\begin{aligned} & \text { MGT } 201 \\ & \text { (p. 280) } \end{aligned}$ | Legal Envirnmt-Bus | 3 |
| MGT 301 <br> (p. 280) | Organiztnl Behavior | 3 |
| MGT 490 <br> (p. 280) | Managing the Entrpse (Satisfies CAP Integrative) | 3 |
| MTH 128 <br> (p. 280) | Finite Math | 3 |
| MTH 129 <br> (p. 280) | Calc for Business (Satisfies CAP Mathematics) | 3 |
| $\begin{aligned} & \text { MIS } 301 \\ & \text { (p. 280) } \end{aligned}$ | Info Sys in Org | 3 |
| $\begin{aligned} & \text { MKT } 301 \\ & \text { (p. 280) } \end{aligned}$ | Prin of Marketing | 3 |
| $\begin{aligned} & \text { OPS } 301 \\ & \text { (p. 280) } \end{aligned}$ | Survy-Oper\&Supply Mgt | 3 |
| $\begin{aligned} & \text { PHL } 313 \\ & \text { (p. 280) } \end{aligned}$ | Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL) | 3 |
| $\begin{aligned} & \text { or REL } 368 \\ & \text { (p. 280) } \end{aligned}$ | Practical wisdom in the business world |  |
| ECO elective (300/400 level) |  | 3 |
| Social Scienc | ective (ANT, POL, PSY, SOC) | 3 |

## Major Requirements

Courses required for the major. (Visit program descriptions in Programs of Study.)

## General Electives

Majors have 0-12 hours of general electives depending upon the major and choice of courses in the Common Academic Program. Many students use the general elective hours to support an additional major or minor.

## Academic Programs

The School of Business Administration offers a Bachelor of Science in Business Administration degree with majors and minors in:

- Accounting (p. 283)
- Business Economics (p. 287)
- Entrepreneurship (p. 298)
- Finance (p. 289)
- International Business (p. 294)
- Leadership (p. 300)
- Management Information Systems (p. 309)
- Marketing (p. 301) (emphasis in Sales Management (p. 302) available)
- Operations and Supply Management (p. 310)

Minors are also available in:

- Business Administration (p. 286) (non-business majors only)
- Business Analytics (p. 312)
- Business Intelligence (p. 310)
- Cyber-Security (p. )

Double majors and minors in business administration programs, and also in non-business programs, are available. A maximum of seven hours of coursework can double count between double majors and a major and a minor. Interested students should consult with their academic advisor in the SBA Center for Academic Success for details.

A Bachelor of Science in Business Administration with a major in accounting, coupled with an MBA degree is also available. This program normally requires a fifth year of study. Students must apply and qualify for admission into graduate school during their fourth year in order to participate.

## Degree Requirements

1. The candidate must successfully complete all course requirements for the BS in Business Administration including:

> a. courses in the liberal arts required by the University Common Academic Program
> b. courses in business and liberal arts required for all School of Business Administration (SBA) students;
> c. courses required to complete a major in the SBA.
2. Students must complete 124 total semester hours to graduate.
a. Courses totaling 54 semester hours must be at the 300-400 level.
b. Waived course hours must be made up with an equivalent number of undergraduate course hours.
c. Only 7 hours of course work can double count between two majors or a major and a minor.
d. From 0 to 12 hours of general elective credits are required to reach the required total semester hours, depending on major and choice of courses to fill Common Academic Program requirements. The general elective hours may be used to support a second major or minor.
e. At least 30 of the final 36 semester hours must be earned in residence at the University of Dayton.
f. At least 75 percent of the student's required courses in business disciplines must be taken at the University of Dayton. Exceptions are made for transfer students.
3. The candidate for graduation must have at least a 2.0 cumulative grade point average and also at least a 2.0 grade point average in each major and minor. The 2.0 grade point average in the major includes all courses attempted in the student's major except for the courses that are part of the SBA core.
4. In addition to those courses which must be taken under Option 1, a student may take a maximum of 12 semester hours of general electives under Option 2 within the hours required for graduation in the degree program. A student may take any course beyond the minimum hours required for graduation in the degree program under Option 2. All
courses that are used to fulfill Liberal Arts, Business, major, minor, and Competency requirements must be taken under Option 1.
5. The candidate has the responsibility of meeting degree requirements for the BS in Business Administration. Therefore, the student should be thoroughly familiar with the degree requirements and with his or her progress towards meeting those requirements.

## Transfer Students

Candidates for admission from other accredited colleges or universities must be in good academic standing in the colleges or universities from which they are transferring and submit a complete application in accordance with UD admissions policies.

## INTERNAL TRANSFERS:

Students must first attend an initial internal transfer meeting with an Academic Advisor in the School of Business Administration. Stop in the Center for Academic Success in Miriam Hall 108 to schedule this initial SBA internal transfer meeting.

Minimum Requirements:

1. Minimum cumulative UD GPA of 2.7
2. Successful completion of an appropriate UD Math course, such as a UD Calculus class, a C+ or higher in MTH 116 or MTH 128, or a B- or higher in MTH 207. Math courses taken at another college or university will NOT be considered.

## Cooperative Education

The School of Business Administration participates in the University of Dayton Cooperative Education Program, which is an optional program often consisting of full-time, on-campus study alternating with terms of full-time, off-campus work. For a fuller explanation of the program, visit Cooperative Education (p. 52).

## Internship

Internships are defined as professional work experience. The intent is to provide practical experience in implementing the theory and skills learned in the classroom in work associated with the student's academic major. It is an option open to all undergraduate students pursuing four-year programs.

Students can earn credit for internships only through the department of their major. Approval from the department chairperson or the chairperson's designee is a prerequisite for earning general elective credit for participation in the program. Individual departments may require other prerequisite courses prior to the internship experience. Students are responsible for checking with the department of their major prior to beginning the internship to determine the prerequisites unique to the department.

Positions offered to students may be either compensatory or noncompensatory. The intent of the internship is to be beneficial to both the students and the participating organizations. Assistance in finding internships is available from Career Services, department chairs, and faculty.

Academic credit may be approved for a successful internship. Such credit is applied as general elective credit only. The maximum number of semester hours that may be earned over the full four-year degree
program is six, although individual department requirements may differ. Interested students should see the department chairperson or designee for further information as soon as they are eligible for participation.

## Study Abroad Programs

Students in the School of Business Administration (SBA) may participate in the University of Dayton Summer Study Abroad Programs as well as Semester Exchange Programs with partners throughout the world. Details on both these programs can be found at www.udayton.edu/edabroad and brief descriptions are provided below.

Summer Programs. A variety of summer programs are available for students to consider, each with its own theme and location. For example, students can travel to Europe, South America, Asia, or Africa. Most of these programs are conducted during two separate five-week summer terms. Shorter two-week trips are also available during summer and the Intersession (winter break). The programs are taught by UD faculty and offer students the opportunity to complete required and theme-based elective courses in settings such as England, Spain, Italy, Germany, China, and more. Students participating in Summer Study Abroad register to take at least two classes ( 6 credit hours) plus a 1 -credit cultural immersion mini-course in a summer session. Participants will complete work equivalent to that of courses taken on campus, with the added requirement of applying their studies to the site they are visiting.

Accepted students are required to participate in a comprehensive orientation and preparation class in which features about their destination country are studied along with University safety and security procedures and other pre-departure details. Students on academic or behavioral probation are not permitted to participate in any University study abroad program. All interested students are encouraged to meet with their advisor or the Study Abroad Director well in advance of any travel.

Semester Exchange Programs. Students may also wish to spend an extended time studying overseas. For those students, UD provides several opportunities to take classes with one of our foreign exchange partners throughout the world. Exchanges can be undertaken either during the Fall or Spring semesters, and students will live and study with other domestic and international students at our foreign exchange partner institutions. Courses are typically taught in English, although some partners have foreign language requirements. To ensure courses taken during a semester exchange transfer to UD, students must seek approval by advisors in the Center for International Programs (CIP) as well as their SBA advisor before undertaking an exchange.

Planning for Education Abroad. Students should ideally begin planning during their first year for participation in a study abroad program, determining which courses are normally offered and then holding those courses for their international experience and completing any necessary prerequisites prior to the program. If pre-approved by SBA advisors, the courses taken abroad will then count for the student's degree program, keeping the student on track to graduate on time or even ahead of schedule.

For more information please contact:

## Short Term Study Abroad Exchange Programs/Partner Information

Peter G. Wagner, Director Heather Schieman, Education Abroad Advisor SBA Study Abroad Programs Center for International Programs AN 119 Rike 211
937-229-2479 937-229-1251
pwagner1@udayton.edu hschieman1@udayton.edu

## Programs of Study

To learn more about the available programs in the School of Business Administration, explore the departments:

- Accounting (p. 283)
- Business (p. 286)Interdisciplinary Studies
- Economics and Finance (p. 287)
- International Business (p. 294)
- Management and Marketing (p. 297)
- Management Information Systems, Operations Management, and Decision Sciences (p. 308)


## Accounting

Major:

- Bachelor of Science in Business Administration, Accounting (p. 283)

Minor:

- Accounting (p. 284)

The mission of the Department of Accounting is to prepare our students for successful professional careers by providing high quality educational programs in accounting within an environment that connects learning, scholarship, leadership, and service creating distinctive graduates able to add value to employers, clients, and society.

In addition to other requirements, an accounting major must earn credit in seven upper-level accounting courses. Six specific courses are required:ACC 303, ACC 305, ACC 306, ACC 341, ACC 401, and ACC 420. One additional accounting course is typically required but may be waived for students electing to complete a combined BSBA with a major in accounting and an MBA or completing a second major. All upper-division accounting courses require a minimum grade of " C " in all prerequisite accounting courses, except that ACC 303 and ACC 305 require a minimum of "C+" in ACC 207 and ACC 208. Students should consult with their academic advisor about selecting accounting and other elective courses appropriate to particular career goals. Students should also consult their advisor or the chairperson about opportunities for professional work-experience, double majors and minors, foreign exchange opportunities, and requirements for professional examinations (e.g., CPA).

Students may complete a 150 semester hour program required to become a CPA in Ohio and numerous other states. The MBA program, with an optional concentration in accounting, is particularly useful in this regard. Our integrated BSBA/MBA program allows for the completion of both degrees, plus professional work experience, foreign exchange experience and a second major or minor, in five years. Consult the department chairperson or an advisor for more information.

## Faculty

Donna Street, Chairperson
Professors Emeriti: Clark, Eley, Fioriti, Geary, Roehm, Rosenzweig Mahrt Chair in Accounting: Donna Street
Professors: Castellano, Street
Associate Professors: Archambeault, Brady, Burrows, Greenlee Assistant Professors: Webber

Lecturers: Fedders, Prevish, Rogero, Shankar

## Bachelor of Science in business administration with a major in Accounting (ACC) minimum 124 credit hours

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Human | ities Commons ${ }^{1}$ | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variable credit |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variable credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |  |
| 3 Completed with ENG 200H or ASI 120. |  |  |
| SBA Core Curriculum |  |  |
| ACC 207 <br> (p. 283) | Intro-Financial Acc | 3 |
| $\begin{aligned} & \text { ACC } 208 \\ & \text { (p. 283) } \end{aligned}$ | Intro-Managerial Acc | 3 |
| $\begin{aligned} & \text { BAI } 150 \\ & \text { (p. 283) } \end{aligned}$ | Bus Educ Planning | 1 |
| $\begin{aligned} & \text { BAI 103L } \\ & \text { (p. 283) } \end{aligned}$ | Bus Computing Lab | 1 |
| $\begin{aligned} & \text { BAI } 151 \\ & \text { (p. 283) } \end{aligned}$ | Bus Integratn Exp | 1 |
| $\begin{aligned} & \text { DSC } 210 \\ & \text { (p. 283) } \end{aligned}$ | Stats For Bus I | 3 |
| $\begin{aligned} & \text { DSC } 211 \\ & \text { (p. 283) } \end{aligned}$ | Stats For Bus II | 3 |



| CAP Components and/or | 3 |
| :--- | ---: |
| General Electives |  |
|  | 31 |
| Fourth Year | Hours |
| MGT 490 (Satisfies CAP | 3 |
| Integrative ) |  |
| PHL 313 or REL 369 | 3 |
| (Satisfies CAP Practical |  |
| Ethical Action and Adv |  |
| Studies in PHL/REL) |  |
| ECO upper level elective | 3 |
| ACC 341 | 3 |
| ACC 401 | 4 |
| ACC 420 | 4 |
| ACC 497 ( Satisfies CAP | 3 |
| Major Capstone) |  |
| CAP Components and/or | 6 |
| General Electives |  |

## 29

Total credit hours: 124

## Courses

## ACC 200. Introduction to Accounting. 3 Hours

Introduction to primarily financial and secondarily managerial accounting concepts, terminology, purposes, and applications for the nonbusiness student. Not open to students in the School of Business Administration or to those with credit in ACC 207.

## ACC 207. Introduction to Financial Accounting. 3 Hours

Introduction to financial accounting concepts, procedures, and terminology. The accounting framework for recording transactions and reporting to parties external to the organization. Prerequisite(s): Sophomore standing or permission of department chairperson.

## ACC 208. Introduction to Managerial Accounting. 3 Hours

Management use of accounting data in planning and controlling organization activities; cost accounting and analysis of data for management decision making. Prerequisite(s): ACC 207. Corequisite(s): BAI 103L.

## ACC 300A. Principles of Financial Accounting. 1.5 Hour

An introduction to the concepts and procedures underlying financial accounting and financial statements, and the use of financial accounting information for decision making. Credit may not be earned for both ACC 300A and either ACC 200 or ACC 207. Prerequisite(s): Engineering major; sophomore standing; permission of department chairperson.

ACC 300B. Principles of Managerial Accounting. 1.5 Hour An introduction to the concepts underlying the preparation and use of accounting data by managers as they plan, control, and make decisions within an organization. Credit may not be earned for both ACC 300B and ACC 208. Prerequisite(s): ACC 300A; engineering major; sophomore standing; permission of department chairperson.

## ACC 303. Managerial Accounting. 3 Hours

The production, dissemination, and interpretation of financial and nonfinancial information for use within an organization. Information for planning, decision making, and control. Study of typical cost accounting systems in various organizations. Prerequisite(s): (ACC 207, ACC 208, with mimimum grades of 'C+'; junior standing) or permission of department chairperson.

ACC 305. Intermediate Financial Accounting I Part I. 4 Hours Part I (part II in ACC 306) of a comprehensive treatment of financial accounting concepts, principles, and procedures used in the preparation and analysis of financial statements. Prerequisite(s): (ACC 207, ACC 208, with minimum grades of ' $\mathrm{C}+$ '; junior standing) or permission of department chairperson.

ACC 306. Intermediate Financial Accounting II Part II. 3 Hours Part II of comprehensive treatment of financial accounting concepts, principles, and procedures used in the preparation and analysis of financial statements. Prerequisite(s): ACC 305 with a minimum grade of 'C'.

## ACC 341. Accounting Information Systems I. 3 Hours

Study of designs of accounting systems, including their impact on management decision making and control. Emphasis on (1) a systems approach to the flow of data, (2) system internal control, and (3) computer applications in accounting. Prerequisite(s): ACC 305 with a minimum grade of 'C'; (MIS 301 or permission of department chairperson).
ACC 401. Auditing Principles. 4 Hours
Study of the concepts, standards, and procedures used to judge and report on the degree of correspondence between quantifiable information and established criteria; the ethical, regulatory, and professional responsibilities of the auditor and introduction to internal, operational, and governmental auditing. Prerequisite(s): ACC 306 with a minimum grade of 'C'; ACC 341 with a minimum grade of 'C'.

## ACC 404. Advanced Strategic Cost Management. 3 Hours

Study of processes focused on strategic cost management. Topics include balanced scorecards, activity-based costing management, target costing, lean accounting, six sigma, environmental accounting, and performance measurement and control systems. Prerequisite(s): (ACC 303; OPS 301) with a minimum grade of ' $C$ '.
ACC 408. Advanced Financial Accounting. 3 Hours
Study of consolidated financial statements and accounting for business combinations, government organizations, multinational subsidaries, and foreign currency transactions. Selected IFRS issues are integrated into the course. Prerequisite(s): ACC 306 with a minimum grade of $C$ or permission of department chairperson.

## ACC 412. International Accounting. 3 Hours

Introduction to issues of international business as they relate to accounting; accounting practices in selected countries, and activities of the International Accounting Standards Board. Prerequisite(s): ACC 305 or permission of department chairperson.

## ACC 412A. Contemporary Issues in Accounting. 3 Hours

Seminar covering emerging or controversial issues for the student who has a strong accounting background. Topics include the business and financial situations that underlie accounting problems and controversies, alternative accounting techniques which are accepted or proposed, and the consequences of various accounting practices. Prerequisite(s): ACC 306 or permission of instructor.

## ACC 412B. International Accounting. 3 Hours

Study of current topics in international accounting. This course will typically include a week or more of study outside of the U.S. that will include lectures and relevant site visits. In addition to normal tuition, there may be travel and other costs and fees. Foreign locations, countries, topics, and duration may vary. Prerequisite(s): ACC 306 or permission of instructor.

## ACC 412C. International Accounting-IFRS Certificate and Research.

 3 HoursThis class includes a comprehensive study of International Financial Reporting Standards (IFRS). Students will complete the Institute of Chartered Accountants in England and Wales' (ICAEW) IFRS learning and assessment program and upon successful completion earn an IFRS certificate from this globally recognized professional accountacy body. Prerequisite(s): ACC 408 or permission of the instructor. Effective Fall 2013: minimum 3.0 cummulative and major gpa required.
ACC 412D. International Accounting-IFRS Certificate and Research. 3 Hours
This class is for NON-UD degree seeking students. The class includes a comprehensive study of International Financial Reporting Standards (IFRS). Students will complete the Institute of Chartered Accountants in England and Wales' (ICAEW) IFRS learning and assessment program and upon successful completion earn an IFRS certificate from this globally recognized professional accountacy body. Prerequisite(s):ACC 408 or permission of instructor.

## ACC 420. Federal Income Taxation. 4 Hours

Study of federal income tax laws and their application to individuals, partnerships, and corporations. Develop research techniques for federal income tax issues as they relate to preparation of federal individual income tax preparation. The historical, social, economic, and political influence on taxation laws are emphasized. Consideration is given to legal, moral, business, and personal factors involved in taxation. Prerequisite(s): ACC 305 with a minimum grade of 'C' or permission of department chairperson.
ACC 421. Taxes and Business Strategy. 3 Hours
Primary emphasis is given to analyzing tax planning opportunities for individuals and businesses through the use of in-depth tax research projects. This course builds upon the Federal Income Taxation course to further develop tax policy considerations and discusses possible tax reform. The course provides an introduction to several advanced taxation topics including tax exemption organizations, state and local taxation, international taxation and estate and gift taxation. Prerequisite(s): ACC 420 or permission of instructor.

## ACC 441. Accounting Information Systems II. 3 Hours

Examination of accounting systems with exposure to systems design and evaluation, complex spreadsheet applications, decision support systems, and data base management applications. Prerequisite(s): ACC 341 or permission of instructor.

## ACC 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of program director and chairperson.

## ACC 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of program director and chairperson.

## ACC 497. Professional Work Experience. 1-6 Hours

Supervised accounting work experience in association with a participating public accounting, industrial, commercial, educational, health-care, or governmental organization. May be used for general elective credit only. Option two grading only. Maximum of three credits toward graduation requirements. Permission of chairperson required.

ACC 499. Independent Study in Accounting. 1-6 Hours Individual research in accounting topics under the guidance and direction of an accounting faculty member. A formal, detailed proposal must be completed and approved by the department chair. Prerequisite(s): Senior status in accounting; permission of department chairperson.

## Business Interdisciplinary Studies (BAI)

## Minor in Business Administration (BUS)

Interdisciplinary studies in business are represented by individual courses that are interdisciplinary, such as BAI 150, BAI 151 and BAI 103L, and by the interdisciplinary minor in Business Administration that is offered for students who are not in the School of Business Administration.

BAI 150, BAI 151, and BAI 103L are all required courses for first year students in the School of Business Administration and are part of the business core curriculum.

The minor in Business Administration is a valuable program for nonbusiness majors who intend to pursue careers in business or want to prepare for an MBA program.

The minor in Business Administration is available to non-business majors only. The course requirements are:


Total Hours

## Courses

BAI 103L. Business Computing Laboratory. 1 Hour
Introduction to business software skills including spreadsheets, relational databases, and integration of computer applications. Overview of UD computer ethics policies.

## BAI 150. Business Educational Planning. 1 Hour

Introduction to the School of Business Administration, the University, and educational planning.

## BAI 151. Business Integration Experience. 1 Hour

Integrated introduction to major business processes and decision making.
BAI 294. Special Topics in the School of Business Administration. 3 Hours
Special Topics in the School of Business Administration.
BAI 400. Dean's Leadership Laboratory. 0-3 Hours
Leadership experience under the supervision of the Dean's office. Permission of Dean's office.
BAI 497. Laboratory Work Experience. 1-6 Hours
Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization; practical experience in work associated with the student's major or minor concentration. (See internship coordinator for details.) Does not count toward major. Prerequisite(s): Permission of dean.

## Economics and Finance

Majors:

- Bachelor of Science in Business Administration, Business Economics (p. 287)
- Bachelor of Science in Business Administration, Finance (p. 289)

Minors:

- Business Economics (p. 288)
- Finance (p. 290)

The Department of Economics and Finance offers majors in business economics and in finance for students in the School of Business Administration. The department also offers majors in economics (p. 155) and in applied mathematical economics (p. 195) for students in the College of Arts and Sciences (search these majors to view their requirements.) Minors in economics, business economics, and finance are available to all students.

## Faculty

Trevor Collier, Chairperson
Professors: Caporale, Chen, Frasca, Ruggiero
Associate Professors: Collier, Gustafson, Mohan, Poitras, Wang
Assistant Professors: Chang, Collier, Schutte, Zhang
Lecturers: Douglas, John, Livesay, Shimmin

## Business Economics

Economics teaches students to think analytically about problems that arise in business, politics, and everyday life. The business economics major offers students the strength of economic theory combined with a focus in an area of applied business and develops the student's quantitative skills by requiring course work in econometrics or forecasting. The major is excellent preparation for a wide range of employment opportunities in business, government and education. It also prepares students for graduate study in law, public policy, and business. Students who wish to pursue graduate study in economics should supplement the major with additional mathematics courses or major in applied mathematical economics.

In addition to other requirements, a major in business economics requires: ECO 203-204 (with a grade of C or better), ECO 340 or 346, ECO 410 or 441, ECO 490, 6 additional semester hours of economics electives, and a breadth requirement of 6 semester hours of courses in one other business discipline chosen from a list of approved courses.

See the department office for the approved breadth requirement courses. The breadth courses should be chosen to complement the economics electives taken by the student.

## Faculty

Trevor Collier, Chairperson
Edmund B. O'Leary Professor of Economics: Ruggiero
Professors: Caporale, Frasca, Ruggiero
Associate Professors: Collier, Gustafson, Poitras
Lecturer: John

## Bachelor of Science in business administration with a major in Business Economics (ECB) Minimum 124 credit hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG 200 Writing Seminar II
ral Communication

| CMM $100 \quad$ Principles of Oral Communication | 3 |
| ---: | :--- |

Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variable |
| :--- | :--- |
| credit |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable
credit
Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## SBA Core Curriculum

ACC 207 Intro-Financial Acc 3
(p. 287)

ACC 208 Intro-Managerial Acc 3
(p. 287)

BAI $150 \quad$ Bus Educ Planning 1
(p. 287)

| BAI 103L <br> (p. 287) | Bus Computing Lab | 1 |
| :---: | :---: | :---: |
| BAI 151 (p. 287) | Bus Integratn Exp | 1 |
| $\begin{aligned} & \text { DSC } 210 \\ & \text { (p. 287) } \end{aligned}$ | Stats For Bus I | 3 |
| $\begin{aligned} & \text { DSC } 211 \\ & \text { (p. 287) } \end{aligned}$ | Stats For Bus II | 3 |
| $\begin{aligned} & \text { ECO } 203 \\ & \text { (p. 287) } \end{aligned}$ | Prin of Microecon (Satisfies CAP Social Science) | 3 |
| $\begin{aligned} & \text { ECO } 204 \\ & \text { (p. 287) } \end{aligned}$ | Prin of Macroecon | 3 |
| $\begin{aligned} & \text { ENG } 370 \\ & \text { (p. 287) } \end{aligned}$ | Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) | 3 |
| or ENG 371 <br> (p. 287) | Technical Commnicatn |  |
| or ENG 372 <br> (p. 287) | Business Commicatn |  |
| FIN 301 <br> (p. 287) | Intro to Financial Mgt | 3 |
| MGT 201 <br> (p. 287) | Legal Envirnmt-Bus | 3 |
| MGT 301 <br> (p. 287) | Organiztnl Behavior | 3 |
| MGT 490 <br> (p. 287) | Managing the Entrpse (Satisfies CAP Integrative) | 3 |
| MTH 128 <br> (p. 287) | Finite Math | 3 |
| $\text { MTH } 129$ <br> (p. 287) | Calc for Business (Satisfies CAP Mathematics) | 3 |
| $\begin{aligned} & \text { MIS } 301 \\ & \text { (p. 287) } \end{aligned}$ | Info Sys in Org | 3 |
| MKT 301 <br> (p. 287) | Prin of Marketing | 3 |
| OPS 301 <br> (p. 287) | Survy-Oper\&Supply Mgt | 3 |
| PHL 313 <br> (p. 287) | Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL) | 3 |
| or REL 368 <br> (p. 287) | Practical wisdom in the business world |  |
| ECO elective (300/400 level) |  | 3 |
| Social Science elective (ANT, POL, PSY, SOC) |  | 3 |
| Major Requirements |  | 18 |
| $\begin{aligned} & \text { ECO } 340 \\ & \text { (p. 287) } \end{aligned}$ | Managerial Economics | 3 |
| $\begin{aligned} & \text { or ECO } 346 \\ & \text { (p. 287) } \end{aligned}$ | Intrmd MicroEco Anly |  |
| $\begin{aligned} & \text { ECO } 410 \\ & \text { (p. 287) } \end{aligned}$ | Bus\&Eco Forecasting | 3 |
| $\begin{aligned} & \text { or ECO } 441 \\ & \text { (p. 287) } \end{aligned}$ | Econometrics |  |
| $\begin{aligned} & \text { ECO } 490 \\ & \text { (p. 287) } \end{aligned}$ | Sr Sem-Applied Eco (Satisfies CAP Major Capstone) | 3 |

ECO upper level elective (Satisfies SBA ECO Upper Level Elective) 3

Breadth requirements (see Department Chair for approved 6 selections)

Business economics majors must earn a grade of C or better in ECO 203 and ECO 204.

Academic Electives to bring total to at least 124 credits

## Minor in Business Economics (ECB)

Business Economics

| $\begin{aligned} & \text { ECO } 203 \\ & \text { (p. 287) } \end{aligned}$ | Prin of Microecon ${ }^{1}$ | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { ECO } 204 \\ & (\mathrm{p} .287) \end{aligned}$ | Prin of Macroecon ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { ECO } 340 \\ & (\mathrm{p.} .287) \end{aligned}$ | Managerial Economics | 3 |
| $\begin{aligned} & \text { or ECO } 346 \\ & \text { (p. 287) } \end{aligned}$ | Intrmd MicroEco Anly |  |
| $\begin{aligned} & \text { ECO } 410 \\ & \text { (p. 287) } \end{aligned}$ | Bus\&Eco Forecasting | 3 |
| $\begin{aligned} & \text { or ECO } 441 \\ & \text { (p. 287) } \end{aligned}$ | Econometrics |  |
| Select two ECO electives |  | 6 |
| Total Hours |  | 18 |

1 Students may substitute ECO 300 and one more 300 or 400 level ECO course for ECO 203 (p. 287) and ECO 204 (p. 287).

## Finance

The finance major provides students with a working understanding of the financial decision-making process, how financial markets function, and the acquisition and management of capital. A student may choose a general finance curriculum or specialize in courses relating to investment analysis and portfolio management, financial institutions and services, or corporate financial management. Students will be prepared for a variety of careers in business and in the government sector with work in areas such as financial analysis, capital budgeting, banking, mergers and acquisitions, working capital management, real estate, and insurance. A major in finance is also excellent preparation for graduate studies in business administration or corporate and securities law.

In addition to other requirements, the major in finance consists of FIN 360, Investments; nine semester hours of 400 level finance electives; and six additional semester hours of 300 or 400 level finance electives. Finance majors must earn at least a C in FIN 301, Introduction to Financial Management. One of the electives may come from: ACC 305, ECO 415, ECO 488, MTH 490.

## Faculty

Trevor Collier, Chairperson
William J. Hoben Professor of Finance: Chen
Professor: Chen
Associate Professors: Mohan, Wang
Assistant Professors: Chang, Schutte, Zhang
Lecturers: Douglas, Livesay, Shimmin

## Bachelor of Science in business administration with a major in Finance (FIN) minimum 124 credit hours

## Common Academic Program (CAP)

| *credit hours will vary depending on courses selected |  |
| :--- | :--- |
| First-Year Humanities Commons ${ }^{1}$ | 12 |


| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3

ENG $200 \quad$ Writing Seminar II
Oral Communication 3

| CMM 100 Principles of Oral Communication | 3 |
| ---: | ---: | ---: |
| Mathematics |  |

Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable
Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable

## Philosophy and/or Religious Studies

Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## SBA Core Curriculum

| ACC 207 <br> (p. 287) | Intro-Financial Acc | 3 |
| :--- | :--- | :---: |
| ACC 208 <br> (p. 287) | Intro-Managerial Acc | 3 |
| BAI 150 <br> (p. 287) | Bus Educ Planning | 1 |
| BAI 103L <br> (p. 287) | Bus Computing Lab | 1 |
| BAI 151 <br> (p. 287) | Bus Integratn Exp | 1 |
| DSC 210 <br> (p. 287) | Stats For Bus I | 3 |
| DSC 211 <br> (p. 287) | Stats For Bus II | 3 |
| ECO 203 Prin of Microecon (Satisfies CAP Social Science) | 3 |  |

ECO 204 Prin of Macroecon 3
(p. 287)

ENG $370 \quad$ Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) 3
(p. 287)
or ENG 371 Technical Commnicatn
(p. 287)
or ENG 372 Business Commicatn
(p. 287)

FIN 301 Intro to Financial Mgt 3
(p. 287)

MGT 201 Legal Envirnmt-Bus 3
(p. 287)

MGT 301 Organiztnl Behavior 3
(p. 287)

MGT $490 \quad$ Managing the Entrpse (Satisfies CAP Integrative) 3
(p. 287)

MTH 128 Finite Math 3
(p. 287)

MTH $129 \quad$ Calc for Business (Satisfies CAP Mathematics) 3
(p. 287)

MIS $301 \quad$ Info Sys in Org 3
(p. 287)

MKT $301 \quad$ Prin of Marketing 3
(p. 287)

OPS 301 Survy-Oper\&Supply Mgt 3
(p. 287)

PHL 313 Business Ethics (Satisfies CAP Practical Ethical 3
(p. 287)

Action and Adv Studies in PHL/REL)
Practical wisdom in the business world
or REL 368
(p. 287)

ECO elective (300/400 level) 3
Social Science elective (ANT, POL, PSY, SOC) 3

Major Requirements 18
FIN 360 Investments 3
(p. 287)

Select two FIN electives (400 level) 6
FIN major capstone course (choose from FIN 479 or FIN 493 to 3
satisfy CAP Major Capstone)
Select two FIN electives (300-400 level), one may be from: 6

| ACC 305 | Intrm Financial ACC I |
| :--- | :--- |
| (p. 287) |  |
| ECO 415 | Game Thry w/Fin App |
| (p. 287) |  |
| ECO 488 | Prod Eco\&Perf Evltn |
| (p. 287) |  |
| MTH 490 | Readings |
| (p. 287) |  |

Finance majors must earn a grade of C or better in FIN 301.
Academic Electives to bring total to at least 124 credits

| Minor in Finance (FIN) |  |  | MIS 301 | 3 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | MKT 301 | 3 |
| Finance |  |  | OPS 301 | 3 |
| FIN 301 (p. 287) | Intro to Financial Mgt | 3 | ENG 370, 371, or 372 (Satisfies CAP Inquiry) | 3 |
| FiN 360(p. 287) |  | 3 | ECO 340 or 346 | 3 |
|  |  |  | ECO 410 or 441 | 3 |
| Select three FIN electives (at least one at the 400 level) |  | 9 | ECB major breadth elective | 3 |
| Total Hours |  | 15 | CAP Components or | 3 |
|  |  |  | General Electives |  |
| - Finance (p. 290) |  |  |  | 30 |
|  |  |  | Fourth Year | Hours |
| Business ECONOMICS |  |  | ECO elective (satisfies economics elective for ECB major) | 3 |
| First Year | Hours |  |  |  |
| BAI 150 | 1 |  | ECB major breadth elective | 3 |
| BAI 151 | 1 |  | ECO 490 (Satisfies CAP | 3 |
| BAI 103L | 1 |  | Major Capstone) |  |
| ENG 100 (CAP Humanities Commons) | 3 |  | PHL 313 or REL 368 (Satisfies CAP Practical | 3 |
| HST 103 (CAP Humanities Commons) | 3 |  | Ethical Action and ADV Studies in PHL/REL)) |  |
| PHL 103 (CAP Humanities Commons) | 3 |  | MGT 490 (Satisfies CAP Integrative) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |  | CAP Components or General Electives | 15 |
| MTH 128 | 3 |  |  | 30 |
| MTH 129 (Satiesfies CAP | 3 |  | Total credit hours: 124 |  |
| Mathematics) |  |  | FINANCE |  |
| CMM 100 (Satisfies CAP | 3 |  |  |  |
| Oral Communication) |  |  | First Year | Hours |
| CAP components (generally CAP Arts \& CAP Natural Sciences) | 10 |  | BAI 150 | 1 |
|  |  |  | BAI 151 | 1 |
|  | 34 |  | BAl 103L | 1 |
| Second Year <br> CAP Second Year Writing Seminar | Hours |  | ENG 100 (CAP Humanities | 3 |
|  | 3 |  | Commons) 103 (CAP Humanities | 3 |
|  |  |  | Commons) |  |
| CAP Social Science | 3 |  | PHL 103 (CAP Humanities | 3 |
| ACC 207 | 3 |  | Common) |  |
| ACC 208 | 3 |  | REL 103 (CAP Humanities | 3 |
| DSC 210 | 3 |  | Commons) |  |
| DSC 211 | 3 |  | MTH 128 | 3 |
| ECO 203 (grade of C or better required for ECB majors) | 3 |  | MTH 129 (Satisifes CAP Mathematics) | 3 |
|  |  |  | CMM 100 (Satisfies CAP | 3 |
| ECO 204 (grade of C or better required for ECB majors) | 3 |  | Oral Communication) |  |
|  |  |  | CAP components (generally CAP Arts \& CAP Natural | 10 |
| MGT 201 | 3 |  | Sciences) |  |
| CAP components | 3 |  |  | 34 |
|  | 30 |  | Second Year | Hours |
| Third Year | Hours |  | CAP Second Year Writing | 3 |
| FIN 301 | 3 |  | Seminar |  |
| MGT 301 | 3 |  | CAP Social Science | 3 |


| ACC 207 | 3 |
| :---: | :---: |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ECO 203 | 3 |
| ECO 204 | 3 |
| MGT 201 | 3 |
| CAP components | 3 |
|  | 30 |
| Third Year | Hours |
| FIN 301 (grade of C or better required for FIN majors) | 3 |
| MGT 301 | 3 |
| MIS 301 | 3 |
| MKT 301 | 3 |
| OPS 301 | 3 |
| ENG 370, 371, or 372 (Satisfies CAP Inquiry) | 3 |
| FIN 360 | 3 |
| FIN elective | 3 |
| CAP Components or General Electives | 6 |
|  | 30 |
| Fourth Year | Hours |
| ECO 300 or 400 level elective | 3 |
| FIN electives | 9 |
| FIN 479 or 493 (satisifes | 3 |
| CAP Major Capstone) |  |
| PHL 313 or REL 368 (Satisfies CAP Practical | 3 |
| Ethical Action and ADV |  |
|  |  |
| MGT 490 (Satisifes CAP | 3 |
|  |  |
| CAP Components or | 9 |
| General Electives |  |
|  | 30 |

Total credit hours: 124

## Economics Courses

## ECO 203. Principles of Microeconomics. 3 Hours

An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included.

## ECO 204. Principles of Macroeconomics. 3 Hours

Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed.

ECO 301. Seminar in Market Economics. 3 Hours
Market solutions to economic and political issues. Topics vary, but may include issues relating to drugs, gun control, environmental concerns, government interventions, economic and political freedom, and others. Team taught course. Prerequisite(s): ECO 203.

ECO 340. Managerial Economics. 3 Hours
Application of economic models to managerial decision making. Topics include demand analysis, forecasting demand, short-run cost analysis, long-run cost and production functions, pricing, and risk and uncertainty. May not get credit for both ECO 340 and ECO 346. Prerequisite(s): ECO 203.

ECO 346. Intermediate Microeconomic Analysis. 3 Hours
Analysis of the theory of consumer behavior, production theory, equilibrium of the firm, price determination in various market structures, distribution of income, allocation of resources, and welfare economics. May not get credit for both ECO 346 and ECO 340. Prerequisite(s): ECO 203.

## ECO 347. Intermediate Macroeconomic Analysis. 3 Hours

National income accounting and the determination of the level of income and employment; classical, Keynesian, and post-Keynesian models; private, government, and foreign sectors; theories of inflation and economic growth. Prerequisite(s): ECO 204; ECO 203 recommended.

## ECO 390. Antitrust Economics. 3 Hours

Study of how economic analysis has been applied in the interpretation of the antitrust statutes. Examines major anti-trust laws and relevant case law; reviews economic theories of market behavior. Prerequisite(s): ECO 203.

## ECO 410. Business \& Economic Forecasting. 3 Hours

Forecasting techniques, including ARIMA time series models, econometric models, moving averages, exponential smoothing, and time series decomposition, are used to forecast business and economic variables. Data sources, selection of appropriate forecasting tools and models, and evaluation of forecast results are studied. Prerequisite(s): ECO 203, ECO 204; Statistics (DSC 211 or MTH 207 or MTH 367 or MTH 412).
ECO 415. Game Theory with Business Applications. 3 Hours Introductory course in strategic decision making; provides a thorough discussion of the basic techniques of applied game theory and of systematic thinking in making business decisions. Among the topics covered with applications to business are equilibrium strategies, understanding situations involving conflict and cooperation, auction design and bidding strategy, and bargaining and negotiations. Prerequisite(s): ECO 203.

## ECO 435. Economics of the Environment. 3 Hours

Introduction to the economics of the global environment including an analysis of market failure as a cause of environmental degradation. Topics covered include cost-benefits analysis, criteria for public investment, regulation of the environment, and the sustainable global environment. Prerequisite(s): ECO 203.

## ECO 441. Econometrics. 3 Hours

Training in the art of making economic measurements from empirical data using regression analysis as the principle tool; use of computer software to estimate and test regression equations; interpretation of results using statistical inference. Prerequisite(s): (ECO 203, ECO 204; differential calculus and basic statistics) or permission of instructor.

## ECO 442. Money \& Banking. 3 Hours

Principles of money and monetary systems; commercial banking and the role of the Federal Reserve System; monetary theory and policy; the mechanism of international payments. Prerequisite(s): ECO 203, ECO 204.

## ECO 445. Public Finance. 3 Hours

The economic aspects of government finance at the local, state, and especially the national level; the behavioral effects of various taxes, efficiency in spending, the changing role of the U.S. government, fiscal policy, and intergovernmental revenue and expenditure programs; emphasis on relating analytical tools to current developments. Prerequisite(s): ECO 203, ECO 204.

## ECO 460. Economic Development \& Growth. 3 Hours

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations. Prerequisite(s): ECO 203, ECO 204.

## ECO 461. International Economics. 3 Hours

Major issues surrounding international trade and finance, the economic interdependence of nations and businesses, essential theoretical and empirical tools necessary to monitor and analyze international economic phenomena, and the application of these tools to contemporary business problems and issues. Prerequisite(s): ECO 203, ECO 204.

## ECO 471. Labor Economics. 3 Hours

Theory of labor supply and demand, human capital theory, and the process by which wages are determined in various factor markets; applications to topics of unemployment, unions, migration, discrimination, and skill differentials. Prerequisite(s): ECO 203, ECO 204.

## ECO 480. Sports Economics. 3 Hours

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry. Prerequisite(s): ECO 203; (DSC 211 or MTH 207) or equivalent.

## ECO 485. Urban \& Regional Economics. 3 Hours

Treatment of certain theoretical concepts such as location theory and theories of land use and land rent; an economic interpretation for the existence of cities; applying economic analysis to the problems of traffic congestion, pollution, race, poverty, and urban sprawl. Prerequisite(s): ECO 203; (DSC 211 or MTH 207); ECO 346 recommended.
ECO 488. Production Economics \& Performance Evaluation. 3 Hours Intermediate course in theoretical and applied microeconomic production theory; provides a thorough discussion of the basic techniques of applied production theory and performance evaluation of decision making units. Topics include returns to scale, technical and allocative efficiency, benchmarking, environmental costs, and programming. Prerequisite(s): ECO 203.

## ECO 490. Senior Seminar in Applied Economics. 3 Hours

Economic analysis applied in an area of topical interest chosen by the instructor; includes the application of theoretical, mathematical, and statistical methods mastered in previous economics courses. This capstone course provides students an opportunity to extend their proficiency in economic analysis through application and discussion in a small group setting. Typically offered during the spring semester. Economics or Business Economics majors only. Prerequisite(s): Twelve semester hours in Economics.

## ECO 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## ECO 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## ECO 494. Seminar. 3 Hours

Subject varies from time to time. May be taken more than once if topic changes. Prerequisites to be announced.

## ECO 496. Cooperative Education. 3 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward economics major. Permission of chairperson required. Economics or Business Economics majors only. Prerequisite(s): Permission of department chairperson.
ECO 497. Internship for General Elective Credit. 1-3 Hours Practical work experience associated with career development and career exploration relating to the student's major. Permission of the department chair or designee required. Does not replace economics courses for the economics major. Economics or Business Economics majors only. Prerequisite(s): Forty-five semester hours of credit.

## ECO 498. Independent Study in Economics. 1-6 Hours

Directed readings and research in selected fields of economics. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with faculty and other students in the course. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in economics with a minimum of nine semester hours in economics; nomination by faculty; permission of the department chairperson.

## Finance Courses

## FIN 250. Personal Finance. 3 Hours

Principles and techniques for handling personal financial decisions: personal budgeting, obtaining credit, life and casualty insurance, buying a home, buying an automobile, and savings and investments. For both business and nonbusiness majors. Does not count toward the finance major.

## FIN 301. Introduction to Financial Management. 3 Hours

Principles and techniques used by business firms in managing and financing their current and fixed assets; sources of funds within the capital markets; determinants of the financial structure; analytical techniques. Prerequisite(s): (ACC 200 or ACC 207 or ACC 301); ECO 203; junior standing.

## FIN 330. Insurance \& Risk Management. 3 Hours

Study of the basic concepts of business and personal risks from the standpoint of creation, identification, reduction, elimination, and evaluation of risks; the use of insurance in meeting problems of risk. Prerequisite(s): FIN 301 with minimum grade of C .

## FIN 336. Principles of Real Estate. 3 Hours

Survey of real estate industry with emphasis on its structure, regulation, growth, needs, financing, and future. Analysis of the methods for determining land use and evaluation of the theories of city development. Prerequisite(s): FIN 301 with minimum grade of C.

## FIN 360. Investments. 3 Hours

The principles and techniques used by the investor in selecting securities, emphasis on the stock and bond markets; security valuation methods leading to the selection of individual issues; portfolio theory. Prerequisite(s): FIN 301 with minimum grade of C.

## FIN 371. Financial Markets \& Institutions. 3 Hours

Study of financial markets and financial institutions, including the Federal Reserve, interest rate theories, money and capital market securities, interest rate futures, options and swaps, international financial markets, such as commercial banking, insurance, and investment banking. Prerequisite(s): FIN 301 with minimum grade of $C$.

## FIN 401. Advanced Financial Analysis. 3 Hours

Advanced study of current developments in financial planning, acquisition of funds, and asset management valuation; policy strategy and techniques in financial decision making. Prerequisite(s): FIN 301 with minimum grade of $C$.

FIN 402. Mergers, Acquisitions, Capital Restructuring \& Corporate Governance. 3 Hours
In depth study of company valuation techniques and the influence of the governance structure - the CEO, President, and the Board of Directors on company value. Prerequisite(s): FIN 301, FIN 360.

## FIN 430. Short-Term Financial Management. 3 Hours

Covers several areas of the corporate treasury function with a focus on managing current assets and liabilities to enhance the firm's liquidity, profitability, and value. Specific areas include analyzing short-term financial decisions such as financing inventory and receivables, granting, trade credit, and making short-term investments and short-term risk management for interest rates and foreign exchange. This course introduces students to the techniques and practices used to evaluate short-term financial decisions. Prerequisite(s): FIN 301; (FIN 360 or FIN 401).

## FIN 450. International Business Finance. 3 Hours

Introduction to problems facing financial management of international companies, including foreign exchange risk, working capital and capital budgeting decisions for multinational corporations, international financing, accounting and control. Prerequisite(s): FIN 301 with minimum grade of C.

## FIN 460. Portfolio Management \& Security Analysis. 3 Hours

Advanced valuation theory and security analysis; portfolio construction, evaluation, and management. Prerequisite(s): FIN 360.

## FIN 470. Fixed Income Securities. 3 Hours

Introduction to the analytical/computational techniques for pricing fixed income securities, interest rate derivatives, and implementing effective portfolio strategies to control interest rate risk and enhance return. Prerequisite(s): FIN 360 or FIN 371.

## FIN 471. Management of Financial Institutions. 3 Hours

Integrated and comprehensive analysis of financial institutions that include depository institutions, insurance companies, securities firms, and investment companies. Prerequisite(s): FIN 371.

## FIN 475. Commercial Bank Management. 3 Hours

Explores the environment in which banks must operate, the financial statements of banks, and a thorough study of bank management topics which include: asset-liability management, the investment portfolio, sources of funds, and the loan portfolio. Prerequisite(s): FIN 301; (FIN 360 or FIN 371).

## FIN 479. Seminar in Bond Portfolio Management. 3 Hours

Theory and practice in active bond portfolio management. Literature and practical issues related to managing a bond fund. Seminar format; students are divided into teams, each responsible for a specific sector of the fixed income market. Prerequisite(s): FIN 301.

## FIN 480. Options \& Futures Markets. 3 Hours

Study of options, futures, and other derivatives fundamentals, trading strategies, hedging, speculation, and arbitrating, pricing theories, and market regulations. Prerequisite(s): FIN 301; (FIN 360 or FIN 371).

## FIN 481. Fundamental \& Technical Trading. 3 Hours

The art and science of speculative foreign exchange trading, focusing on spot trading of Euros. Students implement a trading plan in a real foreign exchange environment under a set risk management policy. Students learn to watch the market, analyze profitable situations, and produce winning trades. Prerequisite(s): FIN 301.

## FIN 481L. Trading Laboratory. 1 Hour

Prepares students to find positions in proprietary funds, hedge funds, and energy or commodity firms. Focuses on effective communication, résumé writing, interviewing techniques, job negotiation techniques, and the optimal use of e-mail and personal networks and references. Prerequisite(s): FIN 481 or FIN 482 (may be taken as a corequisite).

## FIN 482. Energy Markets. 3 Hours

Energy market portfolio skills: physicality of natural gas market, natural gas pricing, natural gas portfolio transactions including hedging, basic risk management. VaR simulation produced, power pricing and risk management, weather hedging, credit derivatives and their use in energy. Oil basics and pricing a tolling agreement. Prerequisite(s): FIN 301.

## FIN 483. Applied Options Trading. 3 Hours

Comprehensive and detailed analysis of options-pricing, risk characteristics, and their dynamic behavior in the context of the management of a portfolio of options. The underlying market used is the Euro/US dollar futures. The emphasis is on option strategic trading, position management, and the calculation of option risks and profit optimization. Prerequisite(s): FIN 301, 481.

## FIN 484. Advanced Trading Techniques. 3 Hours

Topics include appropriate leverage, when to take profits, when to have a stop loss, and hedging strategies. Students will learn to write shortterm trading plans encompassing fundamental news events and technical charting, then implement a longer view. Each student is expected to open a real micro account from \$300-\$500. Prerequisite(s): FIN 301, 481.

## FIN 485. Financial Modeling. 3 Hours

The objective is to strengthen students understanding of selected financial theory topics through the use of Excel and Visual Basic for Applications (VBA). The emphasis is on applying financial theory presented in other courses. Students learn how VBA significantly enhances the power of Excel. Prerequisite(s): FIN 301 and FIN481.

## FIN 486. Algorithmic Modeling in Currency. 3 Hours

Algorithmic trading models are developed using spot contracts with Euros and Australian dollars. Students work in teams to implement hedging strategies of non-trending Euro risk with Australian dollars. Teams will meet and work with outside Flyer Forex Fund directors. Students need to be proficient in advanced Excel techniques. Prerequisite(s): FIN 301 and FIN 481.

## FIN 487. Bond Derivatives Seminar. 3 Hours

Topics include fixed income basics, bond futures, duration management, the repo market, callable bonds and bond ladders, asset backed securities and death bonds, mortgage backed securities, inflation bonds, Fed fund futures and binary options, and diversification and suitability analysis. Valuable for those seeking to pass level 2 of the CFA exam. Prerequisite(s): FIN 301.

## FIN 490. Personal Financial Consulting. 3 Hours

Subject varies from time to time. May be taken more than once if the topic changes.

## FIN 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## FIN 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## FIN 493. Seminar in Investments. 3 Hours

Application of investment theory and techniques in a real-world setting. Students manage a funded portfolio in terms of establishing objectives, selecting securities to buy (sell), and evaluating portfolio performance. Emphasis is placed upon attempting to identify undervalued common stocks. Admission to the course is limited and must be approved by the instructor. Prerequisite(s): FIN 360 and permission of department chair.
FIN 496. Cooperative Education. 3 Hours
Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward finance major. Finance majors only. Prerequisite(s): Permission of department chairperson.
FIN 497. Internship for General Elective Credit. 1-3 Hours Practical work experience associated with career development and career exploration relating to the student's major. Permission of department chair or designee required. Does not replace finance courses for the finance major. Finance majors only. Prerequisite(s): Forty-five semester hours of credit.
FIN 498. Independent Study in Finance. 1-6 Hours
Directed readings and research in selected fields of finance. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with other students and faculty in the program. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in Finance; minimum of nine semester hours in Finance; nomination by faculty; permission of department chairperson.

## International Business

Major:

- Bachelor of Science in Business Administration, International Business (p. 294)
Minor:
- International Business (p. 295)

The International Business major is an interdisciplinary major designed to meet the needs of students interested in different facets of the international area. It may be taken as a stand-alone major, in conjunction with a major or minor in a functional business discipline, or with a major or minor in a language.

In addition to other requirements, the International Business major requires ECO 460 or ECO 461, FIN 450, MGT 403, MKT 440, INB 302, ING 450 and one international elective. This elective may come from the courses listed above, which are not selected as a required course, or from the following: INB electives, 300 or 400 level language courses that are not part of a language major or minor; or an international course outside the School of Business Administration that is approved by the Director of International Business Programs. In addition, competency in a foreign language, which may be demonstrated by successful completion of two semesters of 200 language study or passing of the competency test given by the language department is required. This foreign language requirement is waived for double majors with another SBA major. An international learning experience is required. This may include participation in a study abroad program, attendance at an educational institution outside the United States, or an international business internship or co-op.

Terence Lau, Director

## Bachelor of Science in business administration with a major in International Business (INB) Minimum of 124 credit hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$
HST 103 The West \& the World
REL 103 Introduction to Religioius \& Theological Studies
PHL 103 Introduction to Philosophy
ENG 100 Writing Seminar I ${ }^{2}$

| Second-Year Writing Seminar ${ }^{3}$ | 0-3 |
| :--- | ---: |
| $\quad$ ENG $200 \quad$ Writing Seminar II |  |
| Oral Communication | 3 |

CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable
credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative


| BAI 103L | 1 |
| :---: | :---: |
| ENG 100 (CAP Humanities Commons) | 3 |
| HST 103 (CAP Humanities Commons) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| CMM 100 (Satisfies CAP <br> Oral Communication) | 3 |
| CAP components (generally CAP Arts and CAP Natural Sciences) or General Electives | 10 |
|  | 34 |
| Second Year | Hours |
| CAP Second Year Writing | 3 |
| Seminar |  |
| ENG 200 |  |
| CAP Social Science | 3 |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ECO 203 | 3 |
| ECO 204 | 3 |
| MGT 201 | 3 |
| INB 302 | 3 |
|  | 30 |
| Third Year | Hours |
| FIN 301 | 3 |
| MGT 301 | 3 |
| MIS 301 | 3 |
| MKT 301 | 3 |
| OPS 301 | 3 |
| ENG 370, 371, or 372 <br> (Satisfies CAP Inquiry) | 3 |
| ECO 460 or 461 (Satisfies SBA Core upper level ECO elective) | 3 |
| INB Elective | 3 |
| CAP Components, Language, or General Electives | 6 |
|  | 30 |
| Fourth Year | Hours |
| FIN 450 | 3 |
| MGT 403 | 3 |
| MKT 440 | 3 |
| INB 450 (Satisfies CAP | 3 |
| Major Capstone) |  |


| PHL 313 or REL 368 | 3 |
| :--- | ---: |
| (Satisifies CAP Practical |  |
| Ethical Action and ADV |  |
| Studies in PHL/REL) |  |
| MGT 490 (Satisfies CAP | 3 |
| Integrative) |  |
| CAP Components, | 12 |
| Language, or General |  |
| Electives |  |

Total credit hours: 124

## Courses

INB 300. Special Topics Study Abroad. 1-3 Hours
Preparation for study abroad programs offered by the School of Business Administration. May be taken more than once if pursuing more than one study abroad experience.

## INB 302. Survey of International Business. 3 Hours

Introduction to international business and how it is different from domestic business. Globalization and its effects, differences in cluture, political, and economic systems across borders. Required of International Business majors and minors.
INB 350. Doing Business in Emerging Markets. 3 Hours
This course is designed to give students an opportunity to explore and understand the challenges to global business in emerging markets, including those in Africa, Asia, Latin and Central America, the Middle East, and the former East Bloc. The course examines commonalities of different regions and countries while highlighting cultural, economic, and sociopolitical differences. Additionally, social responsibility and the emergence of micro-lending and nontraditional forms of business operation will be presented.

## INB 351. Doing Business in Latin America. 3 Hours

This course is designed to provide an overview of the business environment of Latin America within the context of cultural, economic, social, political and historical factors. Students explore negotiation strategies that are unique to Latin America and how U.S. companies (both large and small) should best enter the region. Upon successful completion of this course students will possess a strong awareness of the economic and business environments in Latin America as well as the ability to demonstrate strategic and analytical thinking skills related to local and foreign companies that conduct business in the region. Students will have the opportunity to analyze the big picture through case studies, negotiation simulations and through writing and in-class discussions and presentations.

## INB 352. Doing Business in Asia. 3 Hours

This course is designed as a survey of the evolution of selected economies of Asia, with the aim of identifying conditions and governmental policies that impact economic development. The course provides an overview of sociocultural, religious, historic, economic, and political contexts as these impact ways that business is conducted in Asia.

## INB 353. Doing Business in Europe. 3 Hours

This course is designed as a survey of the evolution of selected economies of Europe, with the aim of identifying conditions and governmental policies that impact economic development. The course reviews the historical steps that led to the establishment of the European Union and provides an in-depth understanding of the EU business environment. The course utilizes case studies to afford participants with a hands-on familiarity with business practices and effective strategies for conducting business in the EU from the perspective of European managers as well as non-European multinational corporations.

## INB 354. Doing Business in Africa. 3 Hours

This course is designed as a survey of the evolution of selected economies of Africa, with the aim of identifying conditions and governmental policies that impact economic development. The course will review problems of economic development faced by many nations of Africa. Topics covered will include poverty, healthcare, agriculture, population growth, education, the role of women, rural-urban migration, industrialization, trade, aid, debt, and economic reforms.

## INB 357. Export Management. 3 Hours

This course offers a comprehensive study of international export procedures and operations. Topics covered include export documentation, managing export transactions, planning export operations, export communications, shipping and packaging, export payment and collection methods, export insurance, governmental and foreign export regulations, export support programs and services, exports within NAFTA, and designing export management systems. This course prepares students for the CGBP (Certified Global Business Professional) Certification. Prerequiste/Co-requisite is INB302.
INB 400. Special Topics in International Business. 3 Hours The topic will vary by semester.

## INB 450. Seminar in Current Global Issues. 3 Hours

Senior capstone seminar in International Business. An examination of factors necessary for global competitiveness including foreign direct investment, strategy of international business, entering foreign markets, global production and logistics, global marketing and R\&D, and global human resource management. Includes integrative project. Required of International Business majors and minors. Prerequisite(s): INB 302; senior standing.

## INB 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the Honors Program and the International Business program director.

## INB 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the Honors Program and the International Business program director.

## INB 497. International Internship. 1-3 Hours

Practical international work experience closely associated with student's major, minor, certificate program. Permission of program director required. See internship coordinator for details.

## Management and Marketing

Majors:

- Bachelor of Science in Business Administration, Entrepreneurship (p. 298)
- Bachelor of Science in Business Administration, Leadership (p. 300)
- Bachelor of Science in Business Administration, Marketing (p. 301)
- Bachelor of Science in Business Administration, Marketing Major with Sales Management Emphasis (p. 302)

Minors:

- Entrepreneurship (p. 299)
- Leadership (p. 301)
- Marketing (p. 302)

The management program offered by the management/marketing department includes a major or minor in two distinct areas: leadership and entrepreneurship. The department also offers a major or a minor in marketing.

## Faculty

Terence Lau, Chairperson
Professors: Bickford, King, Sweeney
Associate Professors: Janney, Kiewitz, Lau
Assistant Professors: Kenworthy, Meek, Sullivan
Lecturers: Chelle, Forlani, Gentner, Miller
Adjunct Faculty: Brady, Dudon, Franks, Gottesman, June, Lewis, Wood

## Entrepreneurship

Students majoring or minoring in entrepreneurship will develop an understanding of how a business enterprise is conceived, launched, and sustained. The curriculum teaches students how to identify viable business opportunities and explores how such opportunities are transformed into new ventures. Additional emphasis is placed on how entrepreneurial ventures:

- Successfully compete for financial resources
- Successfully identify and reach their target markets
- Successfully establish business processes, systems, and controls to manage small and growth-oriented ventures.

Students must apply to and be accepted as an entrepreneurship major. The admissions process is selective and applications currently close on February 15 (date is subject to change). This is a firm deadline. Because entrepreneurship majors begin a two-course sequence in their sophomore year, the only opportunity to apply for admission into the major is during the winter semester of the first year. However, because many talented students who are interested in majoring in entrepreneurship transfer into the School of Business Administration at the end of their first year, non-SBA applicants will be considered through August 1 on a space available basis. Non-SBA students interested in the Entrepreneurship major cannot be admitted until they are officially transferred into the SBA. Normally, no more than 90 students are in each entering sophomore ENT major class.

A key feature of the entrepreneurship major is the Sophomore Experience in which student teams create micro-businesses and actually run them during their sophomore year. This experience is directed through the Crotty Center for Entrepreneurial Leadership and includes seminars with faculty and entrepreneurs who work with students to develop the essential knowledge, skills, and abilities for successfully running a micro business. Another key feature is the senior
seminar in which students work as consultants with an entrepreneur to solve an actual problem within an existing entrepreneurial business. Entrepreneurship majors can also participate in the:

- Everest Real Estate Challenge (open to ENT majors only)
- Flyer Angels (a student-run investment organization open to ENT majors only)
- the UD Business Plan Competition (open to all students, see http:// www.udayton.edu/business/udbpc/ )

For business majors, the minor in entrepreneurship consists of fifteen semester hours.

For non-business majors, the minor in entrepreneurship consists of eighteen semester hours.

## Bachelor of Science in business administration with a major in Entrepreneurship (ENT) minimum of 124 credit hours

## Common Academic Program (CAP)

| *credit hours will vary depending on courses selected | 12 |
| :--- | :--- |
| First-Year Humanities Commons ${ }^{1}$ |  |
| $\begin{array}{ll}\text { HST } 103 & \text { The West \& the World }\end{array}$ |  |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |

$\begin{array}{lc}\text { Second-Year Writing Seminar } \\ \\ \text { ENG } 200 \quad \text { Writing Seminar II }^{2} & 0-3 \\ \text { Oral Communication } & 3 \\ \text { CMM 100 Principles of Oral Communication }\end{array}$
Mathematics 3

Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variabl |
| :--- | :--- |
| credit |  |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable

| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies | 3 |
| Diversity and Social Justice | $0-3$ |
| Major Capstone |  |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## SBA Core Curriculum

ACC 207 Intro-Financial Acc 3

ACC 208
Intro-Managerial Acc 3
(p. 297)

BAI $150 \quad$ Bus Educ Planning 1
(p. 297)

BAI 103L Bus Computing Lab 1
(p. 297)

BAI 151 Bus Integratn Exp 1
(p. 297)

DSC 210 Stats For Bus I 3
(p. 297)

DSC 211 Stats For Bus II 3
(p. 297)

ECO $203 \quad$ Prin of Microecon (Satisfies CAP Social Science) 3
(p. 297)

ECO 204 Prin of Macroecon 3
(p. 297)

ENG $370 \quad$ Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) 3
(p. 297)
or ENG 371 Technical Commnicatn
(p. 297)
or ENG 372 Business Commicatn
(p. 297)

FIN 301 Intro to Financial Mgt 3
(p. 297)

MGT 201 Legal Envirnmt-Bus 3
(p. 297)

MGT 301 Organiztnl Behavior 3
(p. 297)

MGT $490 \quad$ Managing the Entrpse (Satisfies CAP Integrative) 3
(p. 297)

MTH 128 Finite Math 3
(p. 297)

MTH $129 \quad$ Calc for Business (Satisfies CAP Mathematics) 3
(p. 297)

MIS $301 \quad$ Info Sys in Org 3
(p. 297)

MKT $301 \quad$ Prin of Marketing 3
(p. 297)

OPS 301 Survy-Oper\&Supply Mgt 3
(p. 297)

PHL 313 Business Ethics (Satisfies CAP Practical Ethical 3
(p. 297) Action and Adv Studies in PHL/REL)
or REL 368 Practical wisdom in the business world
(p. 297)

ECO elective (300/400 level) 3
Social Science elective (ANT, POL, PSY, SOC) 3
Major Requirements 18

| MGT 220 | Entrepreneurship Sophomore Experience I (Must <br> be taken first semester Sophomore Year) | 2 |
| :--- | :--- | :--- |
| MGT 221 | Entrepreneurship Sophomore Experience II (Must <br> be taken second semester Sophomore Year) | 1 |
| MGT 320 | New Venture Creation | 3 |
| MGT 321 | Financing Entrepreneurial Ventures | 3 |
| MGT 430 | Senior Seminar in Entrepreneurship (Satisfies <br> CAP Major Capstone) | 3 |


| Select two courses from: |  |
| :--- | :--- |
| MGT 402 | Leadership \& Motivation |
| MGT 420 | Entrepreneurial Marketing |
| MGT 421 | Small Business Management |
| MGT 422 | Business Plans for Emerging Firms |
| MGT 423 | Human Resource Management in the Emerging <br>  <br> Firm |
| MGT 424 | Family Business Management |
| MGT 429 | Current Issues in Entrepreneurship |
| MKT 435 | New Product Development |

Academic Electives to bring total to al least 124 credits

## Minor in Entrepreneurship (ENT)

| Entrepreneurship (business majors) |  |  |
| :---: | :---: | :---: |
| MGT 320 <br> (p. 297) | New Venture Creation | 3 |
| MGT 321 <br> (p. 297) | Financing Entp Vent | 3 |
| Select three courses from: ${ }^{1}$ |  | 9 |
| MGT 402 <br> (p. 297) | Leadership\&Motivatn |  |
| MGT 420 <br> (p. 297) | Enrepenrl Marketing |  |
| MGT 421 <br> (p. 297) | Sm Business Managmnt |  |
| MGT 422 <br> (p. 297) | Business Plans |  |
| MGT 423 <br> (p. 297) | HRM /in Emergng Firms |  |
| MGT 424 <br> (p. 297) | Family Business Mgt |  |
| MGT 425 <br> (p. 297) | Franchising |  |
| MGT 429 <br> (p. 297) | Curr Issues-Entrepen |  |
| MKT 435 <br> (p. 297) | New Product Devlp |  |
| Total Hours |  | 15 |

1 A student minoring in entrepreneurship may petition the department chair to substitute other management courses in place of one, but not two, of these electives. The request will be considered in light of the student's overall academic program and career intention. It is recommended that the student speak to the department to determine the course offerings schedule.

## Entrepreneurship (non-business majors)

| ACC 200 | Intro to Accounting | 3 |
| :--- | :--- | ---: |
| (p. 297) |  |  |
| MGT 201 <br> (p. 297) | Legal Envirnmt-Bus | 3 |
| MGT 320 <br> (p. 297) | New Venture Creation | 3 |
| $\left.\begin{array}{lll}\text { MGT 321 } & \text { Financing Entp Vent } & 3 \\ \text { (p. 297) } & & \end{array}\right)$ |  |  |


| Select one course from: |  |
| :--- | :--- |
| MGT 402 | Leadership\&Motivatn |
| (p. 297) |  |
| MGT 420 | Enrepenrl Marketing |
| (p. 297) |  |
| MGT 421 | Sm Business Managmnt |
| (p. 297) |  |
| MGT 422 | Business Plans |
| (p. 297) |  |
| MGT 423 | HRM /in Emergng Firms |
| (p. 297) |  |
| MGT 424 | Family Business Mgt |
| (p. 297) |  |
| MGT 425 | Franchising |
| (p. 297) |  |
| MGT 429 | Curr Issues-Entrepen |
| (p. 297) |  |
| MKT 435 | New Product Devlp |
| (p. 297) |  |

## Total Hours

## Leadership

Students majoring or minoring in leadership will develop understanding and competencies in:

- Motivation
- Group dynamics
- Team processes
- Cross-cultural management
- Employee training and development
- Organizational design, development, and change

For the student majoring in leadership, a key component of the curriculum is the "bookend" experience that begins in the first semester of the junior year with co-registration in Organizational Behavior (MGT 301) and Managerial Skills (MGT 302). Knowledge, skills, and abilities gained in these two courses will be reinforced throughout the remaining leadership courses, and leadership majors are required to demonstrate working competencies in these areas in subsequent courses. To complete the "bookend" experience, leadership majors will register in their senior year for the capstone course, Seminar in Experiencing Leadership.

The management faculty strongly recommend that students completing the leadership major also complete a major or minor in another business discipline. Other majors or minors that are complementary include:

- Entrepreneurship
- Marketing
- Finance
- Operations management
- Accounting
- MIS

A leadership major combined with a major or minor in a business function creates an outstanding combination for employment.

## Bachelor of Science in business administration with a major in Leadership (LDR) minimum of 124 credit hours

| Common Academic Program (CAP) |  |
| :---: | :---: |
| *credit hours will vary depending on courses selected |  |
| First-Year Humanities Commons ${ }^{1}$ |  |
| HST 103 | The West \& the World |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ |  |
| ENG 200 | Writing Seminar II |
| Oral Communication |  |
| CMM 100 | Principles of Oral Communication |
| Mathematics |  |
| Social Science |  |
| Arts |  |
| Natural Sciences |  |
| Crossing Boundaries |  |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study |  |
| Philosophy and/or Religious Studies |  |
| Historical Studies |  |
| Diversity and Social Justice |  |
| Major Capstone |  |
| Completed with ASI 110 and ASI 120. |  |
| Or ENG 100A and ENG 100B, or ENG 200H, by placement.Completed with ENG 200 H or ASI 120 . |  |
|  |  |

## SBA Core Curriculum

| ACC 207 | Intro-Financial Acc | 3 |
| :--- | :--- | :---: |
| (p. 297) |  | 3 |
| ACC 208 <br> (p. 297) | Intro-Managerial Acc |  |
| BAI 150 <br> (p. 297) | Bus Educ Planning | 1 |
| BAI 103L <br> (p. 297) | Bus Computing Lab | 1 |
| BAI 151 <br> (p. 297) | Bus Integratn Exp | 1 |
| DSC 210 <br> (p. 297) | Stats For Bus I | 3 |
| DSC 211 <br> (p. 297) | Stats For Bus II | 3 |
| ECO 203 | Prin of Microecon (Satisfies CAP Social Science) | 3 |
| (p. 297) |  |  |


| $\begin{aligned} & \text { ECO } 204 \\ & \text { (p. 297) } \end{aligned}$ | Prin of Macroecon | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { ENG } 370 \\ & \text { (p. 297) } \end{aligned}$ | Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) | 3 |
| $\begin{aligned} & \text { or ENG } 371 \\ & \text { (p. 297) } \end{aligned}$ | Technical Commnicatn |  |
| $\begin{aligned} & \text { or ENG } 372 \\ & \text { (p. 297) } \end{aligned}$ | Business Commicatn |  |
| $\begin{aligned} & \text { FIN } 301 \\ & \text { (p. 297) } \end{aligned}$ | Intro to Financial Mgt | 3 |
| MGT 201 (p. 297) | Legal Envirnmt-Bus | 3 |
| MGT 301 <br> (p. 297) | Organiztnl Behavior | 3 |
| MGT 490 <br> (p. 297) | Managing the Entrpse (Satisfies CAP Integrative) | 3 |
| MTH 128 <br> (p. 297) | Finite Math | 3 |
| MTH 129 <br> (p. 297) | Calc for Business (Satisfies CAP Mathematics) | 3 |
| $\begin{aligned} & \text { MIS } 301 \\ & (\text { p. 297) } \end{aligned}$ | Info Sys in Org | 3 |
| $\begin{aligned} & \text { MKT } 301 \\ & \text { (p. 297) } \end{aligned}$ | Prin of Marketing | 3 |
| $\begin{aligned} & \text { OPS } 301 \\ & \text { (p. 297) } \end{aligned}$ | Survy-Oper\&Supply Mgt | 3 |
| PHL 313 <br> (p. 297) <br> or REL 368 <br> (p. 297) | Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL) <br> Practical wisdom in the business world | 3 |
| ECO elective (300/400 level) |  | 3 |
| Social Science elective (ANT, POL, PSY, SOC) |  | 3 |
| Major Requirements |  | 18 |
| MGT 302 <br> (p. 297) | Managerial Skills | 3 |
| MGT 401 <br> (p. 297) | Orgn,Dsn,Cul\&Change | 3 |
| MGT 402 <br> (p. 297) | Leadership\&Motivatn | 3 |
| MGT 410 <br> (p. 297) | Senior Sem-Lrdshp (Satisfies CAP Major Capstone) | 3 |
| Select two courses from: |  | 6 |
| MGT 403 <br> (p. 297) | Cross-Cult Managemnt |  |
| MGT 404 <br> (p. 297) | Group Dynamics |  |
| MGT 405 <br> (p. 297) | Employee Traing\&Dev |  |
| MGT 409 <br> (p. 297) | Curr Iss-L'ship |  |
| MGT 423 <br> (p. 297) | HRM /in Emergng Firms |  |
| MGT 425 <br> (p. 297) | Franchising |  |

MKT 411
Sales Management
(p. 297)

Academic Electives to bring total to at least 124 credits

## Minor in Leadership (LDR)

Leadership

| MGT 301 <br> (p. 297) | Organiztnl Behavior | 3 |
| :---: | :---: | :---: |
| MGT 401 <br> (p. 297) | Orgn,Dsn,Cul\&Change | 3 |
| MGT 402 <br> (p. 297) | Leadership\&Motivatn | 3 |
| Select two courses from: ${ }^{1}$ |  | 6 |
| MGT 302 <br> (p. 297) | Managerial Skills |  |
| MGT 403 <br> (p. 297) | Cross-Cult Managemnt |  |
| MGT 404 <br> (p. 297) | Group Dynamics |  |
| MGT 405 <br> (p. 297) | Employee Traing\&Dev |  |
| MGT 409 <br> (p. 297) | Curr Iss-L'ship |  |
| MGT 423 <br> (p. 297) | HRM /in Emergng Firms |  |
| MGT 425 <br> (p. 297) | Franchising |  |
| MGT 429 <br> (p. 297) | Curr Issues-Entrepen |  |
| MKT 411 <br> (p. 297) | Sales Management |  |
| Total Hours |  | 15 |

1 A student minoring in Leadership may petition the department chair to substitute other Management courses in place of one, but not two, of these electives. The request will be considered in light of the student's overall academic program and career intentions.

## Marketing

A student with a major or minor in marketing learns systematic ways for identifying, understanding, and satisfying consumer and organizational needs. Courses in the major are designed to instill in students an appreciation for both the total marketing process as well as specialized marketing activities such as:

- Purchasing
- Sales
- Retailing
- Brand management
- Marketing research

They likewise focus on how to integrate the marketing process with the objectives of the organization, the functions of the economy, and the constraints of society from national and global perspectives. Students learn to apply conceptual principles and quantitative techniques in their study of consumer and business markets with the goal of becoming
informed, skilled, and competent marketing professionals. Marketing majors also have the option to earn an emphasis in Sales Management as part of their major. Specifically, to earn the emphasis, majors must select all three of their electives from a required list of marketing courses that focus on sales and associated issues. This emphasis is very attractive to many prospective employers. The marketing program also competes annually in the National Collegiate Sales Competition. Marketing majors wishing to participate in the competition apply to be on the UD team in the fall.

Marketing majors frequently combine their academic studies with either a co-op or internship work experience. General elective credit for such experiences is approved on a case-by-case basis with the criteria being the nature of the experience and its degree of integration into the student's academic program as well as successful completion of internship/co-op preparation activities required by the department. Junior and senior marketing majors can also apply to participate in the P\&G Marketing Challenge, a competition conducted every semester for marketing students.

## Faculty

Terence Lau, Chairperson
Associate Professors: Pan, Sparks, Wells
Assistant Professors: Davidson, Durmusoglu, Harmon, Hirunyawipada Lecturers: Dickey, Krystofik
Adjunct Faculty: Blanford, Sinnott, Woeste

## Bachelor of Science in business administration with a major in Marketing (MKT) minimum of 124 credit hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$
ENG 200 Writing Seminar II
Oral Communication 3

CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
Crossing Boundaries variable

| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |
| Advanced Study |  |

Philosophy and/or Religious Studies
Historical Studies

| Diversity and Social Justice | 3 |  |
| :--- | ---: | ---: |
| Major Capstone | $0-3$ |  |
| 1 | Completed with ASI 110 and ASI 120. |  |
| 2 | Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 | Completed with ENG 200H or ASI 120. |  |

## SBA Core Curriculum

| ACC 207 <br> (p. 297) | Intro-Financial Acc | 3 |
| :---: | :---: | :---: |
| ACC 208 <br> (p. 297) | Intro-Managerial Acc | 3 |
| $\begin{aligned} & \text { BAI } 150 \\ & \text { (p. 297) } \end{aligned}$ | Bus Educ Planning | 1 |
| $\begin{aligned} & \text { BAI 103L } \\ & \text { (p. 297) } \end{aligned}$ | Bus Computing Lab | 1 |
| $\begin{aligned} & \text { BAI } 151 \\ & \text { (p. 297) } \end{aligned}$ | Bus Integratn Exp | 1 |
| $\begin{aligned} & \text { DSC } 210 \\ & \text { (p. 297) } \end{aligned}$ | Stats For Bus I | 3 |
| $\begin{aligned} & \text { DSC } 211 \\ & \text { (p. 297) } \end{aligned}$ | Stats For Bus II | 3 |
| $\begin{aligned} & \text { ECO } 203 \\ & \text { (p. 297) } \end{aligned}$ | Prin of Microecon (Satisfies CAP Social Science) | 3 |
| $\begin{aligned} & \text { ECO } 204 \\ & \text { (p. 297) } \end{aligned}$ | Prin of Macroecon | 3 |
| $\begin{aligned} & \text { ENG } 370 \\ & \text { (p. 297) } \end{aligned}$ | Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) | 3 |
| or ENG 371 <br> (p. 297) | Technical Commnicatn |  |
| or ENG 372 <br> (p. 297) | Business Commicatn |  |
| $\begin{aligned} & \text { FIN } 301 \\ & \text { (p. 297) } \end{aligned}$ | Intro to Financial Mgt | 3 |
| MGT 201 <br> (p. 297) | Legal Envirnmt-Bus | 3 |
| MGT 301 <br> (p. 297) | Organiztnl Behavior | 3 |
| MGT 490 <br> (p. 297) | Managing the Entrpse (Satisfies CAP Integrative) | 3 |
| MTH 128 <br> (p. 297) | Finite Math | 3 |
| MTH 129 <br> (p. 297) | Calc for Business (Satisfies CAP Mathematics) | 3 |
| $\begin{aligned} & \text { MIS } 301 \\ & \text { (p. 297) } \end{aligned}$ | Info Sys in Org | 3 |
| $\begin{aligned} & \text { MKT } 301 \\ & (\text { p. 297) } \end{aligned}$ | Prin of Marketing | 3 |
| $\begin{aligned} & \text { OPS } 301 \\ & \text { (p. 297) } \end{aligned}$ | Survy-Oper\&Supply Mgt | 3 |
| $\begin{aligned} & \text { PHL } 313 \\ & \text { (p. 297) } \end{aligned}$ | Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL) | 3 |
| or REL 368 <br> (p. 297) | Practical wisdom in the business world |  |
| ECO elective (300/400 level) |  | 3 |
| Social Science | ctive (ANT, POL, PSY, SOC) |  |


| Major Requirements | 18 |  |
| :--- | :--- | ---: |
| MKT 450 | Buyer Behvr\&Mkt Anly (This course and MKT 455 | 6 |
| (p. 297) | together satisfiy CAP Major Capstone.) |  |
| MKT 455 Mkt Planning\&Stratgy (This course and MKT 450 <br> (p. 297) together satisfy CAP Major Capstone.) | 3 |  |
|  |  | 9 |

Select three MKT electives ${ }^{1} 9$

1 To earn an emphasis in Sales Management as part of their Marketing major, students must take MKT 310 (Principles of Selling), MKT 411 (Sales Management), and any ONE of the following three courses: MKT 350 (Internet Marketing), MKT 420 (Entrepreneurial Marketing), or MKT 428 (Promotion Management). Marketing majors may also select MIS 467 (Data Warehousing) as a marketing elective if they are double majoring in MIS.

Academic Electives to bring total to at least 124 credits

## Minor in Marketing (MKT)

| Marketing (business majors) |  |
| :--- | ---: |
| MKT 301 <br> (p. 297) | 3 |
| Select four MKT electives (300/400 level) $)^{1}$ | 12 |
| Total Hours | 15 |
| Marketing (non-business majors) |  |
| MKT 300 $\quad$ Survey of MKT <br> (p. 297) | 3 |
| Select four MKT electives $(300 / 400 \text { level) })^{1}$ | 12 |
| Total Hours | 15 |

1 In a pattern selected in consultation with an academic advisor.

- Entrepreneurship (p. 302)
- Leadership (p. 303)
- Marketing (p. 304)
- Marketing with a Sales Management Emphasis (p. 304)


## Entrepreneurship

| First Year | Hours |
| :--- | ---: |
| BAI 150 | 1 |
| BAI 151 | 1 |
| BAI 103L | 1 |
| ENG 100 (CAP Humanities | 3 |
| Commons) |  |
| HST 103 (CAP Humanities | 3 |
| Commons) |  |
| PHL 103 (CAP Humanities <br> Commons) | 3 |
| REL 103 (CAP Humanities <br> Commons) <br> MTH 128 | 3 |
| MTH 129 (Satisfies CAP | 3 |
| Mathematics) | 3 |
| CMM 100 (Satisfies CAP | 3 |
| Oral Communication) |  |


| CAP components (generally CAP Natural Science and | 10 | ENG 100 (CAP Humanities Commons) | 3 |
| :---: | :---: | :---: | :---: |
| CAP Natural Science and CAP Arts) |  | HST 103 (CAP Humanities | 3 |
|  | 34 | Commons) |  |
| Second Year | Hours | PHL 103 (CAP Humanities | 3 |
| CAP Second Year Writing | 3 | Commons) |  |
| Seminar |  | REL 103 (CAP Humanities | 3 |
| CAP Social Science | 3 | Commons) |  |
| MGT 220 (Must be taken first semester) | 2 | MTH 128 | 3 |
|  |  | MTH 129 (Satisfies CAP | 3 |
| MGT 221 (Must be taken second semester) | 1 | Mathematics) |  |
|  |  | CMM 100 (Satisfies CAP | 3 |
| ACC 207 | 3 | Oral Communication) |  |
| ACC 208 | 3 | CAP components (generally | 10 |
| DSC 210 | 3 | CAP Natural Science and |  |
| DSC 211 | 3 | AP Arts |  |
| ECO 203 | 3 |  | 34 |
| ECO 204 | 3 | Second Year | Hours |
| MGT 201 | 3 | CAP Second Year Writing Seminar | 3 |
|  | 30 | CAP Social Science | 3 |
| Third Year | Hours | ACC 207 | 3 |
| MGT 301 | 3 | ACC 208 | 3 |
| MKT 301 | 3 | DSC 210 | 3 |
| FIN 301 | 3 | DSC 211 | 3 |
| MIS 301 | 3 | ECO 203 | 3 |
| OPS 301 | 3 | ECO 204 | 3 |
| ENG 370, 371, or 372 <br> (Satisfies CAP Inquiry) | 3 | MGT 201 | 3 |
| MGT 320 | 3 | MGT 301 | 3 |
| MGT 321 | 3 |  | 30 |
| CAP Components and/or General Electives | 6 | Third Year | Hours |
|  |  | MGT 302 | 3 |
|  | 30 | MKT 301 | 3 |
| Fourth Year | Hours | FIN 301 | 3 |
| MGT 490 (Satisfies CAP | 3 | MIS 301 | 3 |
| Integrative) |  | OPS 301 | 3 |
| PHL 313 or REL 368 (Satisfies CAP Practical | 3 | ENG 370, 371, or 372 <br> (Satisfies CAP Inquiry) | 3 |
| Ethical Action and Adv |  | MGT 401 | 3 |
| Studies in PHL/REL) |  | MGT 402 | 3 |
| MGT 430 | 3 | CAP Components and/or | 6 |
| ECO upper level elective | 3 | General Electives |  |
| ENT Electives | 6 |  | 30 |
| CAP Components and/or General Electives | 12 | Fourth Year | Hours |
|  |  | MGT 490 (Satisfies CAP | 3 |
|  | 30 | Integrative) |  |
| Total credit hours: 124 |  | PHL 313 or REL 368 (Satisfies CAP Practical | 3 |
| Leadership |  | Ethical Action and Adv |  |
|  |  | Studies in PHL/REL) |  |
| First Year | Hours | ECO upper level elective | 3 |
| BAI 150 | 1 | MGT 410 | 3 |
| BAI 151 | 1 | LDR Electives | 6 |
| BAI 103L | 1 |  |  |


| CAP Components and/or General Electives | 12 | Fourth Year | Hours |
| :---: | :---: | :---: | :---: |
|  |  | MGT 490 (Satisfies CAP | 3 |
|  | 30 | Integrative) |  |
| Total credit hours: 124 |  | PHL 313 or REL 368 (Satisfies CAP Practical | 3 |
| Marketing |  | Ethical Action and Adv |  |
|  |  | Studies in PHL/REL) |  |
| First Year | Hours | MKT 455 | 3 |
| BAI 150 | 1 | ECO upper level elective | 3 |
| BAI 151 | 1 | MKT Electives | 6 |
| BAI 103L | 1 | CAP Components and/or | 12 |
| ENG 100 (CAP Humanities | 3 | General Electives |  |
| Commons) |  |  | 30 |
| HST 103 (CAP Humanities Commons) | 3 | Total credit hours: 124 |  |
| PHL 103 (CAP Humanities Commons) | 3 | Marketing with a Sales management Emphasis |  |
| REL 103 (CAP Humanities Commons) | 3 |  |  |
|  |  | First Year | Hours |
| MTH 128 | 3 | BAI 150 | 1 |
| MTH 129 (Satisfies CAP Mathematics) | 3 | BAI 151 | 1 |
|  |  | BAI 103L | 1 |
| CMM 100 (Satisfies CAP <br> Oral Communication) | 3 | ENG 100 (CAP Humanities Commons) | 3 |
| CAP components (generally CAP Natural Science and CAP Arts) | 10 | HST 103 (CAP Humanities Commons) | 3 |
|  | 34 | PHL 103 (CAP Humanities Commons) | 3 |
| Second Year | Hours | REL 103 (CAP Humanities | 3 |
| CAP Second Year Writing Seminar | 3 | Commons) |  |
|  |  | MTH 128 | 3 |
| CAP Social Science | 3 | MTH 129 (Satisfies CAP | 3 |
| ACC 207 | 3 | Mathematics) |  |
| ACC 208 | 3 | CMM 100 (Satisfies CAP | 3 |
| DSC 210 | 3 | Oral Communication) |  |
| DSC 211 | 3 | CAP components (generally | 10 |
| ECO 203 | 3 | CAP Natural Science and |  |
| ECO 204 | 3 | CAP Arts) |  |
| MGT 201 | 3 |  | 34 |
| MKT 301 | 3 | Second Year | Hours |
|  | 30 | CAP Second Year Writing Seminar | 3 |
| Third Year | Hours |  |  |
| MGT 301 | 3 | CAP Social Science | 3 |
| FIN 301 | 3 | ACC 207 | 3 |
| MIS 301 | 3 | ACC 208 | 3 |
| OPS 301 | 3 | DSC 210 | 3 |
|  | 3 | DSC 211 | 3 |
| (Satisfies CAP Inquiry) |  | ECO 203 | 3 |
| MKT 450 | 6 | ECO 204 | 3 |
| MKT Elective | 3 | MGT 201 | 3 |
| CAP Components and/or | 6 | MKT 301 | 3 |
| General Electives |  |  | 30 |
|  | 30 | Third Year | Hours |
|  |  | MGT 301 | 3 |
|  |  | FIN 301 | 3 |


| MIS 301 | 3 |
| :--- | ---: |
| OPS 301 | 3 |
| ENG 370, 371, or 372 | 3 |
| (Satisfies CAP Inquiry) |  |
| MKT 310 | 3 |
| MKT 450 | 6 |
| Cap Components and/or | 6 |
| General Electives |  |
|  | 30 |
| Fourth Year |  |
| MGT 490 (Satisfies CAP | 3 |
| Integrative) | 3 |
| PHL 313 or REL 368 |  |
| (Satisfies CAP Practical |  |
| Ethical Action and Adv |  |
| Studies in PHL/REL) |  |
| ECO upper level elective |  |
| MKT 411 | 3 |
| MKT 455 | 3 |
| MKT Electives | 6 |
| CAP Components and/or | 12 |
| General Electives |  |

## Total credit hours: 124

## Management Courses

## MGT 201. Legal Environment of Business. 3 Hours

Survey of the legal environment in which businesses operates. Includes overview of legal system and judicial processes and coverage of constitutional principles for U.S. legal system, ways to resolve legal disputes, forms of business organization, legal issues relevant to employment, legal responsibility of businesses to clients and customers, and liability issues. Prerequisite(s): Sophomore standing.
MGT 220. Entrepreneurship Sophomore Experience I. 2 Hours First of two-course sequence. Designed to immerse Entrepreneurship major into the dynamics of starting and running a micro-business. Focuses on identifying market need, researching financial viability of business venture to meet that need, and marshalling the resources (among them, financial, human, technical, and motivational) to launch the business. Course is coordinated through the Crotty Center for Entrepreneurial Leadership. Prerequisite(s): Entrepreneurship major; sophomore standing; overall 2.7 GPA. Corequisite(s): ACC 207; MGT 201.

MGT 221. Entrepreneurship Sophomore Experience II. 1 Hour Continuation of MGT 220. Focuses on growing and running the microbusiness throughout the academic year with planned liquidation or shutdown by the end of the academic year. Course is coordinated through the Crotty Center for Entrepreneurial Leadership. Prerequisite(s): ACC 207; MGT 201, MGT 220; Entrepreneurship major; overall 2.7 GPA. Corequisite(s): ACC 208.

## MGT 301. Organizational Behavior. 3 Hours

Study of individual, group, and team behavior in organizations as they interact to achieve both personal and organizational goals. Topics include individual differences, interpersonal communication, leadership, decisionmaking, reward systems, conflict management, and work groups and teams Prerequisite(s): Sophomore standing.

MGT 302. Managerial Skills. 3 Hours
Course focuses on knowledge, skills and abilities in oral and written communication, decision-making, and facilitation of conflict management and group/team management. Demonstrated working competencies are required to complete the course. Prerequisite(s): Sophomore standing.

## MGT 313. Negotiation. 3 Hours

Course integrates conceptual understanding with practical application of negotiation and examines cultural and gender differences in negotiation, influence of personality traits, the negotiation process, and different ways in which to negotiate. Demonstrated knowledge, skills and abilities are part of course requirements. Prerequisite(s): MGT 301; junior standing.

## MGT 314. Survey of Human Resources. 3 Hours

Survey course designed to familiarize students with the major functional areas in human resources including planning, recruitment and selection, training and development, compensation, benefits, safety, and employee relations. Course develops framework for understanding the roles of HR professional, issues faced by managers and supervisors, and application of sound management theory to these issues. Prerequisite(s): Junior standing.

## MGT 318. Management \& Society. 3 Hours

Study of business firms' relationship with society through examination of influence of the competitive environment, government, interest groups, and lobbyists in the public policy process. Subjects include technological changes, racism, poverty, diversity, urban issues, and environmental concerns. Prerequisite(s): Junior standing.

## MGT 320. New Venture Creation. 3 Hours

Overview of the concepts and aspects involving creation of new business ventures, new product development, and innovation within existing companies now popularly called corporate venturing. Topics include entry strategies, creating high potential opportunities, entrepreneurial finance, business plan development, entrepreneurial marketing, the legal structures of new businesses, and government programs for assisting entrepreneurial firms. Fall sections open to Entrepreneurship majors only with overall 2.7 GPA. Prerequisite(s): (ACC 200 or ACC 208); MGT 201; junior standing.

## MGT 321. Financing Entrepreneurial Ventures. 3 Hours

Focuses on financial aspects of starting, growing, and harvesting entrepreneurial ventures. Includes assessments of various sources of capital for small and growth businesses with emphasis placed on how common financing deals are structured, common financing pitfalls, and various legal documentation used to consummate financial transactions. Fall sections open to Entrepreneurship majors only with overall 2.7 GPA. Prerequisite(s): ACC 200 or (ACC 207, ACC 208); junior standing. Corequisite(s): FIN 301 or MGT 320.

## MGT 401. Organizational Design, Culture \& Change. 3 Hours

Course focused at the organizational level of analysis that includes design of organizations, development of organizational culture, and other issues of organizational change. Topics include processes for organizational design and change, power, and information processing. Prerequisite(s): MGT 301; junior standing.

## MGT 402. Leadership \& Motivation. 3 Hours

An in-depth study of individual and group/team motivation in an organizational setting through examination of individual, organizational, and societal influences on motivation. Focus is on how leaders can understand, and then affect, motivation through a variety of mechanisms. Prerequisite(s): MGT 301; junior standing.

## MGT 403. Cross-Cultural Management. 3 Hours

Study of general cross-cultural differences and development of cross-cultural frameworks in decision-making, negotiation, conflict management, communication, and general business relations. Primary emphasis is on understanding how and why cultures differ and how such differences can be managed. Prerequisite(s): MGT 301; junior standing.

## MGT 404. Group Dynamics, Team Processes \& Decision Making. 3

 HoursIn-depth study of group formation, team design, and diagnosis with emphasis on developing and maintaining different types of groups and teams. Course focuses on leaders' knowledge, skills and abilities to work effectively with teams and groups. Prerequisite(s): MGT 301; junior standing.

## MGT 405. Employee Training \& Development. 3 Hours

Focuses on training and learning methods and models, career paths, and self-improvement methods within the balance of organizational, job, and individual needs. Additional emphasis on systematic development and evaluation of training programs and role of organizational leader in ensuring employee training and development. Prerequisite(s): MGT 301; junior standing.

## MGT 409. Current Issues in Leadership. 3 Hours

Selected topics that consider and analyze current problems and emerging issues in leadership and in the leader's role in promoting effective organizational change and development. Prerequisite(s): MGT 301; junior standing.

## MGT 410. Senior Seminar in Experiencing Leadership. 3 Hours

Focus on integration of knowledge, skills and abilities acquired in leadership major courses. Seminar combines classroom component with relevant and approved internship or consulting project to integrate the study of leadership with its practice. Prerequisite(s): MGT 401, MGT 402; Leadership major; senior standing.

## MGT 414. Multinational Corporate Management. 3 Hours

Introduction to use of strategic management in international context with examination of different strategic and tactical approaches organizations use to manage international operations. Prerequisite(s): Senior standing.

## MGT 420. Entrepreneurial Marketing. 3 Hours

Study of the techniques used to profitably identify and fill customers' needs when operating with a limited budget during the early stages of a start-up or in a small to medium sized firm. Course strives to develop skills in applying basic marketing principles and high impact sales and promotion techniques in integrated manner to produce a practical, costeffective action plan for start-ups and smaller companies. Also listed as MKT 420. Prerequisite(s): MKT 300 or MKT 301; junior standing.

## MGT 421. Small Business Management. 3 Hours

Course addresses unique characteristics of small businesses (e.g., resource limitations, family participation) and grapples with ways to overcome the "liability of smallness." Coverage includes effect of macrotrends (e.g., changing technology and globalization) on small business, review of topics from functionally-oriented courses, examination of how functional models such as pricing models can be modified for small business use, and ways for small business to identify and exploit weaknesses of larger, better financed competitors. Prerequisite(s): ACC 200 or 208; MGT 201; junior standing.

MGT 422. Business Plans for Emerging Firms. 3 Hours
This course explores multiple business models for launching a new venture. Business models are examined in terms of the type of product/ service being offered as well as the goals of the entrepreneur, firm growth, and time to market. The benefits and costs of different types of business plans will be examined relative to the opportunities that students may wish to pursue. Students taking this course must have a potential business opportunity in mind. Prerequisite(s): MGT 320, MGT 321; junior standing; ENT major; permission of department chairperson.

## MGT 423. Human Resource Management in the Emerging Firm. 3 Hours

This course explores issues unique to the human resource management (HRM) needs and challenges facing entrepreneurs and their firms. Emphasis is placed on how entrepreneurs can create effective HRM systems in the areas of staffing, recruitment and selection, compensation, motivations, and employee development. Care will be given to address the changes in HRM needs as the firm evolves through several transitional stages. Prerequisite(s): MGT 301; junior standing.

## MGT 424. Family Business Management. 3 Hours

This course explores topics relevant to entrepreneurs within the family business environment. Specific topics examined will include how family businesses emerge and evolve as well as the unique challenges often found in family business context (e.g., dealing with family conflicts, how to motivate and evaluate employees when a mix of family and non-members are involved, and planning for succession). Prerequisite(s): MGT 320, MGT 321; junior standing.

## MGT 425. Franchising. 3 Hours

Provides an overview of business franchising and how franchising can be used to grow a business concept. Students will learn how franchises operate and when to use franchising as a business model. Understanding the complexities of franchising (e.g. which ideas can be franchised, pricing strategies, and territory management) and the keys to success (e.g., the importance of communications, networking, teamwork, leadership) are important goals of the course. Counts as elective credit for ENT/LDR majors and minors. Prerequisite(s): Junior standing; ENT/ LDR majors and minors only.

## MGT 429. Current Issues in Entrepreneurship. 3 Hours

In -depth examination of selected contemporary topics relevant to entrepreneurship. Subject matter may vary each semester. May be taken only once for credit toward Entrepreneurship major or minor. Prerequisite(s): Junior standing.

## MGT 430. Senior Seminar in Entrepreneurship. 3 Hours

Project-based capstone learning experience for Entrepreneurship major. Course objective is to integrate prior coursework through completion of a consulting project with local entrepreneurial firm, including business plan revision, market research, feasibility testing, financial modeling and analysis, and operations analysis. Course is coordinated through the Crotty Center for Entrepreneurial Leadership. Prerequisite(s): MGT 301, MGT 320, MGT 321; Entrepreneurship major; senior standing; 2.7 overall GPA or higher.

## MGT 490. Managing the Enterprise. 3 Hours

Course focuses on creating understanding of how concepts and analytical tools learned in other business courses are integrated in practice to create a unified whole. Students learn how general and top managers gather and use information to influence organizational mission, goals, and strategies. Course typically relies heavily on cases and/or business simulation. Prerequisite(s): DSC 211: FIN 301; MGT 301; MIS 301; MKT 301; OPS 301; senior standing; Business majors only.

## MGT 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent and original research thesis under guidance of departmental faculty member. Prerequisite(s): University Honors Program participant; permission of department chairperson and director of Honors Program; senior standing.

## MGT 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent and original research thesis under guidance of departmental faculty member. Prerequisite(s): University Honors Program participant; permission of department chairperson and director of Honors Program; senior standing.

## MGT 494. Seminar in Management. 3 Hours

Study of selected topics or issues in contemporary managerial practice, domestic or international. May be taken more than once if topics change. Title will reflect topics covered in a particular offering. Prerequisite(s): Vary by topic; junior standing.

## MGT 497. Internship for General Elective Credit. 1-3 Hours

Supervised work experience in partnership with sponsoring employer that is directly relevant to major or minor. Must work with internship coordinator and get approval of department chairperson or designee. May be used for general elective credit only. Prerequisite(s):
Entrepreneurship or Leadership major; junior standing; overall GPA of 2.7 or higher; permisson of Internship Coordinator.

MGT 498. Cooperative Education. 1-3 Hours
Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Permission of chairperson or designee required. May be used for general elective credit only. LDR or ENT majors only. Prerequisite(s): Overall GPA of 2.7 or higher.

## MGT 499. Independent Study. 1-3 Hours

Supervised study involving directed readings, individual research (library, field, or experimental), or projects in specialized area of management. May be taken only once. May count as general elective credit. Does not apply to requirements for Leadership or Entrepreneurship major or minor. Prerequisite(s): MGT 301; ENT or LDR major; senior standing; sponsorship by faculty member; permission of department chairperson.

## Marketing Courses

## MKT 300. Survey of Marketing. 3 Hours

Survey of marketing for non-marketing majors. Course introduces students to market and environmental analysis, marketing strategy and link with corporate strategy, market segmentation, organizational and consumer markets, and marketing mix (product, price, promotion, distribution). Prerequisite(s): Non-business majors only; sophomore standing.

## MKT 301. Principles of Marketing. 3 Hours

The general principles and practices underlying the processes of marketing. Analysis of the environmental conditions of manufacturers, wholesalers, retailers, and other marketing agencies. Prerequisite(s): Business majors only; sophomore standing.

## MKT 310. Principles of Selling. 3 Hours

The nature of selling, explored through the practical application of buying motives and selling techniques. Projects and role-playing to experience the preparation, closing, and post-purchase phases of selling. Prerequisite(s): MKT 300 or MKT 301.

## MKT 315. Retail Marketing. 3 Hours

Survey of the development of retailing and the impact of consumer behavior, fashion, computers, and other innovations. Structural organization, location, and layout. Merchandising operations including planning of sales, purchases, stock control, markup, and expense control. Prerequisite(s): MKT 300 or MKT 301.

## MKT 330. Services Marketing. 3 Hours

Basic concepts of services marketing including discussion of marketing concepts and their management implications in services organizations, the scope of ethics and social responsibility at the national and global levels, and how the external environment, both domestic and international, influences organization strategy. Prerequisite(s): MKT 300 or MKT 301.

## MKT 340. Multicultural Marketing Analysis. 3 Hours

Study of basic concepts and theories of multicultural marketing. Students acquire basic understanding of culture, awareness of cultural differences, and appreciation of importance of cultural adaptation for marketing program, especially as related to development of marketing systems. Prerequisite(s): MKT 300 or MKT 301.

## MKT 341. Business-to-Business Marketing. 3 Hours

Concepts and analytical procedures associated with marketing to business. Business consumer and competitor analysis, marketing information systems, marketing research, and demand forecasting. Strategy development in product, promotion, distribution, and pricing with focus on manufacturers of business products. Prerequisite(s): MKT 300 or MKT 301.

## MKT 350. Internet \& Electronic Marketing. 3 Hours

Comprehensive study of the internet as a marketing channel and as an economic and social phenomenon. Emphasis is on role of internet in firm's overall marketing efforts, especially marketing mix, target markets, and external environment; principles of e-commerce; and application of course knowledge in a managerial and decision-making context. Prerequisite(s): MKT 300 or MKT 301.

## MKT 405. Consumer Behavior. 3 Hours

Comprehensive study of buyer decision making which offers insight into the buyer-seller relationship. Application of theories from psychology and social psychology to investigate the behavior of industrial and consumer buyers. Prerequisite(s): MKT 300 or MKT 301.

## MKT 406. Marketing Channels. 3 Hours

Study of the place element of the marketing mix. A focus on the relationships among manufacturers, wholesalers, and retailers. Channel structure and design including franchising. Prerequisite(s): MKT 300 or MKT 301.

## MKT 411. Sales Management. 3 Hours

The structure of the sales organization; determination of sales policies; selection, training, and motivation of salespersons; establishing sales territories and quotas. Prerequisite(s): (MKT 300 or MKT 301); MKT 310.

## MKT 420. Entrepreneurial Marketing. 3 Hours

Study of the techniques used to profitably identify and fill customers' needs when operating within a limited budget during the early stages of a start-up or in a small to medium sized firm. Course strives to develop skills in applying basic marketing principles and high impact sales and promotion techniques in integrated manner to produce a practical, costeffective action plan for start-ups and smaller companies. Also listed as MGT 420. Prerequisite(s): MKT 300 or MKT 301.

## MKT 421. Advertising. 3 Hours

Nature and scope of advertising, social and economic aspects, role of research, creative strategy, media planning and selection, coordination with other marketing efforts. Prerequisite(s): MKT 300 or MKT 301.

## MKT 428. Promotion Management. 3 Hours

Integration course to familiarize marketing students interested in promotion and marketing communication with tools necessary for the development, implementation, and management of promotional programs. Focus on management and coordination of advertising, personal selling, publicity and public relations, sales promotion, and collateral materials. Prerequisite(s): MKT 300 or MKT 301.

## MKT 435. New Product Development. 3 Hours

Investigation and analysis of the new product development process, the management of a product through its life cycle, and the importance of the price variable in the product management process. Prerequisite(s): MKT 300 or MKT 301.

## MKT 436. Marketing Intelligence. 3 Hours

This course provides an examination of how consumer marketing is evolving in the context of consumer behavior analysis, personalized marketing channels, and computer automation tools. The focus is on analyzing personalized consumer marketing based on consumer behavior. Prerequisite(s): MKT 300 or MKT 301.

## MKT 440. Global Marketing. 3 Hours

Emphasis on understanding global marketing environments, developing skills of global market analysis, designing and developing appropriate marketing strategies for global markets, decision making in global marketing. Prerequisite(s): MKT 300 or MKT 301.
MKT 445. Special Topics in International Marketing. 3 Hours Study abroad program. Subject varies from time to time. May be taken more than once if topic changes Prerequisite(s): Junior standing.

## MKT 450. Buyer Behavior \& Market Analysis. 6 Hours

Integration of theoretical components of buyer behavior and marketing research. Emphasis placed on how marketing managers use concepts from these bodies of knowledge to make better decisions. Topics include common processes and methods of contemporary market research, analysis of purchase decisions, market research techniques used to gather information about purchase decisions, and use of information to formulate and implement a marketing strategy. Prerequisite(s): MKT 301; Marketing major; junior standing.

## MKT 455. Marketing Planning \& Strategy. 3 Hours

Integrative course in marketing with emphasis on managerial decision making. The course is designed around a strategic marketing planning approach with a clear emphasis on how to do strategic analysis and marketing planning. Prerequisite(s): ACC 207, ACC 208; MKT 450; Marketing major.

## MKT 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## MKT 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

MKT 494. Special Topics in Marketing. 3 Hours
Subject varies from time to time. May be taken more than once if topic changes. Prerequisite(s): Vary by topic.
MKT 497. Internship for General Elective Credit. 1-3 Hours Practical work experience associated with career development and career exploration. See internship coordinator for details. Permission of department chair or designee required. Prerequisite(s): MKT major; junior standing; overall gpa of 2.7 or higher; permission of internship coordinator.

## MKT 498. Cooperative Education. 1-3 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Permission of chairperson or designee required. For general elective credit only. Prerequisite(s): MKT major; overall gpa of 2.7 or higher.

## MKT 499. Independent Study in Marketing. 1-3 Hours

Study of one or more specific aspects of the marketing process with emphasis on individual reading and research. Subject matter to be determined by the instructor on the basis of interest and need of the student. Enrollment limited. Permission of chairperson or designee required. Prerequisite(s): MKT 301; MKT major; senior standing; permission of department chairperson.

## Management Information Systems, Operations Management and Decision Sciences

## Majors:

- Bachelor of Science in Business Administration, Management Information Systems (p. 309)
- Bachelor of Science in Business Administration, Operations and Supply Management (p. 310)

Minors:

- Business Analytics (p. 312)
- Business Intelligence (p. 310)
- Cyber Security (p. 310)
- Management Information Systems (p. 310)
- Operations and Supply Management (p. 312)

The Department of Management Information Systems, Operations Management, and Decision Sciences offers courses in several quantitative and systems areas, a major and a minor in management information systems, a major and minor in operations and supply management, and minors in business analytics, business intelligence and cyber-security.

## Faculty

Jayesh Prasad, Chairperson
Professor Emeritus and Distinguished Service Professor: Bohlen Professors Emeriti: Amsden, Casey, Hoffer, Vlahos
Sherman-Standard Register Professor of MIS: Thomas Ferratt
Niehaus Chair in Operations Management: John Kanet
Professors: Bobrowski, Dunne, Ferratt, Gorman, Kanet, Prasad, Wells
Associate Professors: Enns, Salisbury, Wynn
Assistant Professors: Harrod, Jacobs

Lecturers: Hall, Wagner

## Management Information Systems

The MIS major at the University of Dayton is designed primarily to develop business systems analysts. These professionals analyze and design information systems in business organizations and marshal resources (i.e. manage projects) to bring the systems development effort to successful completion. MIS professionals also facilitate the successful operation and maintenance of organizational information systems.

The major is comprised of eighteen hours (seven courses) of required courses which make up the MIS core and six hours of elective courses taken for breadth. Optionally, this breadth requirement can be satisfied by completing a related minor - currently Business Intelligence or Cyber Security - or by completing a double major in another business discipline. Related minors will change from time to time, reflecting the dynamic nature of the MIS discipline. Students should meet with their advisor to decide whether to opt for elective courses, a related minor, or a doublemajor consistent with their interests and career goals.

## Faculty

Jayesh Prasad, Chairperson
Professor Emeritus and Distinguished Service Professor: Bohlen
Professors Emeriti: Amsden, Casey, Hoffer, Vlahos
Sherman-Standard Register Endowed Chair in MIS: Ferratt
Niehaus Chair in Operations Management: Kanet
Professors: Bobrowski, Dunne, Ferratt, Gorman, Kanet, Prasad, Wells
Associate Professors: Enns, Salisbury, Wynn
Assistant Professors: Harrod, Jacobs
Lecturers: Hall, Wagner

## Bachelor of Science in business administration with a major in Management Information Systems (MIS) minimum of 124 credit hours

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humani | nities Commons ${ }^{1}$ | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundar |  | variable credit |

Faith Traditions
Practical Ethical Action
Inquiry

| Integrative |  |  |
| :---: | :---: | :---: |
| Advanced Study |  | variable credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |  |
| 3 Completed with ENG 200 H or ASI 120. |  |  |
| SBA Core Curriculum |  |  |
| ACC 207 <br> (p. 308) | Intro-Financial Acc | 3 |
| ACC 208 <br> (p. 308) | Intro-Managerial Acc | 3 |
| BAI 150 (p. 308) | Bus Educ Planning | 1 |
| BAI 103L <br> (p. 308) | Bus Computing Lab | 1 |
| BAI 151 (p. 308) | Bus Integratn Exp | 1 |
| $\begin{aligned} & \text { DSC } 210 \\ & \text { (p. 308) } \end{aligned}$ | Stats For Bus I | 3 |
| $\begin{aligned} & \text { DSC } 211 \\ & \text { (p. 308) } \end{aligned}$ | Stats For Bus II | 3 |
| $\begin{aligned} & \text { ECO } 203 \\ & \text { (p. 308) } \end{aligned}$ | Prin of Microecon (Satisfies CAP Social Science) | 3 |
| $\begin{aligned} & \text { ECO } 204 \\ & \text { (p. 308) } \end{aligned}$ | Prin of Macroecon | 3 |
| $\begin{aligned} & \text { ENG } 370 \\ & \text { (p. 308) } \end{aligned}$ | Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) | 3 |
| or ENG 371 <br> (p. 308) | Technical Commnicatn |  |
| or ENG 372 <br> (p. 308) | Business Commicatn |  |
| FIN 301 | Intro to Financial Mgt | 3 |
| MGT 201 <br> (p. 308) | Legal Envirnmt-Bus | 3 |
| MGT 301 <br> (p. 308) | Organiztnl Behavior | 3 |
| MGT 490 <br> (p. 308) | Managing the Entrpse (Satisfies CAP Integrative) | 3 |
| MTH 128 <br> (p. 308) | Finite Math | 3 |
| MTH 129 <br> (p. 308) | Calc for Business (Satisfies CAP Mathematics) | 3 |
| $\begin{aligned} & \text { MIS } 301 \\ & \text { (p. 308) } \end{aligned}$ | Info Sys in Org | 3 |
| $\begin{aligned} & \text { MKT } 301 \\ & (\text { p. 308) } \end{aligned}$ | Prin of Marketing | 3 |
| $\begin{aligned} & \text { OPS } 301 \\ & \text { (p. 308) } \end{aligned}$ | Survy-Oper\&Supply Mgt | 3 |


| $\begin{aligned} & \text { PHL } 313 \\ & \text { (p. 308) } \end{aligned}$ | Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL) | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { or REL } 368 \\ & \text { (p. 308) } \end{aligned}$ | Practical wisdom in the business world |  |
| ECO elective (300/400 level) |  | 3 |
| Social Science elective (ANT, POL, PSY, SOC) |  | 3 |
| Major Requirements |  |  |
| MIS 305 | Introduction to Business Applications: Problem Solving with Visual Tools | 1 |
| MIS 325 | Programming for Business Systems | 4 |
| MIS 380 | Systems Analysis \& Re-Engineering | 3 |
| MIS 381 | Principles of Project Management | 1 |
| MIS 385 | Systems Implementation with Database Management Systems | 3 |
| MIS 465 | MIS Project I-Analysis \& Design in Teams (This course and MIS 475 together satisfy CAP Major Capstone.) | 3 |
| MIS 475 | MIS Project II-Design \& Implementation in Teams (This course and MIS 465 together satisfy CAP Major Capstone.) | 3 |
| Breadth courses through electives, related minors, or double majors. |  | 6 |
| Total Hours |  |  |

Electives Option
Select two courses from:

| MIS 366 | Business Intelligence |
| :--- | :--- |
| MIS 368 | Principles of Information Security Management |
| MIS 430 | Telecommunications \& Networking-Classified |
| MIS 460 | Advanced Web Development |
| MIS 467 | Data Warehousing |
| MIS 468 | Internet Security-Classified |
| MIS 499 | Independent Study in Management Information <br> Systems |

## Related Minor Option

Complete requirements for one of these two minors: (1) Business Intelligence or (2) Cyber Security

## Double Major Option

Complete the requirements for any other SBA major.

## Academic Electives to bring total to at least 124 credits

## Minors in Management Information Systems (MIS)

Three minors are offered in Management Information Systems: Business Intelligence, Cyber-Security, and Management Information Systems.

## Minor in Business Intelligence

| MIS 300 | Survey of Management Information Systems <br> or MIS 301 | 3 |
| :--- | :--- | ---: |
| MIS 305 | Information Systems in Organizations |  |
| Introduction to Business Applications: Problem |  |  |
| MIS 366 | Solving with Visual Tools | 1 |
| MIS 385 | Sysiness Intelligence <br> Management Systems | 3 |
| MIS 467 | Data Warehousing | 3 |


| MIS elective $^{1}$ | 3 |
| :--- | ---: |
| Total Hours | 16 |

1. Choose from DSC 375, ECO 410, ECO 440, MIS 368, MIS 460, MKT 436 or as approved by the coordinator. MIS majors must select six semester hours from this list instead of three.

## Minor in Cyber-Security

$\left.\begin{array}{llr}\text { MIS 300 } & \text { Survey of Management Information Systems } & 3 \\ \text { or MIS 301 } & \begin{array}{llr}\text { Information Systems in Organizations }\end{array} & \\ \text { MIS 305 } & \begin{array}{l}\text { Introduction to Business Applications: Problem }\end{array} & 1 \\ & \text { Solving with Visual Tools }\end{array}\right]$

1 Any 300 or 400 level MIS course (excluding MIS 491, MIS 492, MIS 497, MIS 498, and MIS 499) or as approved by the coordinator.

Minor in Management Information Systems
$\left.\begin{array}{lll}\text { MIS 300 } & \begin{array}{l}\text { Survey of Management Information Systems } \\ \text { or MIS 301 }\end{array} & 3 \\ \text { MISormation Systems in Organizations }\end{array}\right)$

Two 300/400 level courses ${ }^{1}$
Total Hours
1 Select six additional semester hours: at least three hours must be a 300 or 400 level MIS course (excluding MIS 491, MIS 492, MIS 497, MIS 498, and MIS 499); three additional hours may be either from the list of approved relevant major courses or another 300 or 400 level MIS course (excluding those listed above). A relevant major course is one that features concepts intended to bridge between the MIS minor and the student's major. For the list of approved relevant major courses see the MIS minor coordinator. Other courses may be taken with approval of the MIS minor coordinator, in consultation with the student's major advisor(s). Currently approved relevant major courses are: ACC 401, DSC 375, ECO 410, ECO 441, MKT 436, and OPS 350.

## Operations and Supply Management

The operations and supply management program offered by the Department of Management Information Systems, Operations Management, and Decision Sciences includes a major and a minor in operations and supply management (OPS).

Students who major or minor in operations and supply management learn how to manage the core operations of an organization. These core operations use the human, technical, and financial resources of the organization to create goods and services for customers. Operations
managers apply technical and quantitative tools and techniques, together with behavioral skills, to manage the transformation of inputs into outputs desired by customers. Operations managers participate in these transformation processes in many different roles, including:

- Process improvement analyst
- Quality assurance analyst
- Purchasing agent
- Production/inventory manager
- Warehouse manager
- Service facility manager
- Operations consultant

The OPS program is selective. UD students wishing to declare an OPS major must have an overall GPA of 2.8 or higher. Moreover, to declare and/or remain in the program students must earn a grade of $B$ - or higher in the introductory course, OPS 301. Exceptions to these requirements must be approved by the MIS/OM/DSC Department Chair.

In addition to other requirements, the major in Operations and Supply Management requires OPS 350, Business Process Management, DSC 375, Management Science, OPS 401, Operations Planning and Control, OPS 480, Supply Chain Management Strategies, OPS 485, Capstone OPS Project I, OPS 495, Capstone OPS Project II, and six semester hours of OPS electives.

A minor in operations and supply management is available to students who want to acquire basic skills in this area and understand that doing so will enhance their ability to manage operations in any functional area of a business. A minor in operations and supply management consists of twelve hours for students in the School of Business Administration and 21 hours for non-business students.

## Faculty

Jayesh Prasad, Chairperson
Professor Emeritus and Distinguished Service Professor: Bohlen
Professors Emeriti: Amsden, Casey, Hoffer, Vlahos
Sherman-Standard Register Professor of MIS: Ferratt
Niehaus Chair in Operations Management: Kanet
Professors: Bobrowski, Dunne, Ferratt, Gorman, Kanet, Prasad, Wells
Associate Professors: Enns, Salisbury, Wynn
Assistant Professors: Harrod, Jacobs
Lecturers: Hall, Wagner

## Bachelor of Science in business administration with a major in Operations and Supply Management (OPS) minimum of 124 credit hours



| Oral Communication | 3 |
| :--- | :---: |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable |
|  | credit |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable <br> credit |
| :--- | ---: | ---: |
| Philosophy and/or Religious Studies |  |
| Historical Studies | 3 |
| Diversity and Social Justice | $0-3$ |
| Major Capstone |  |
| 1 Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 | Completed with ENG 200H or ASI 120. |

## SBA Core Curriculum

ACC 207 Intro-Financial Acc 3
(p. 308)
ACC 208 Intro-Managerial Acc 3
(p. 308)

BAI 150 Bus Educ Planning 1
(p. 308)

BAI 103L Bus Computing Lab 1
(p. 308)

BAI 151 Bus Integratn Exp 1
(p. 308)

DSC 210 Stats For Bus I 3
(p. 308)

DSC 211 Stats For Bus II 3
(p. 308)

ECO $203 \quad$ Prin of Microecon (Satisfies CAP Social Science) 3
(p. 308)

ECO 204 Prin of Macroecon 3
(p. 308)

ENG 370 Rprt\&Proposal Wrtng (Satisfies CAP Inquiry) 3
(p. 308)
or ENG 371 Technical Commnicatn
(p. 308)
or ENG 372 Business Commicatn
(p. 308)

FIN 301 Intro to Financial Mgt 3
(p. 308)

MGT 201 Legal Envirnmt-Bus 3
(p. 308)

MGT 301 Organiztnl Behavior 3
(p. 308)

| MGT 490 <br> (p. 308) | Managing the Entrpse (Satisfies CAP Integrative) |
| :---: | :---: |
| MTH 128 <br> (p. 308) | Finite Math |
| MTH 129 <br> (p. 308) | Calc for Business (Satisfies CAP Mathematics) |
| $\begin{aligned} & \text { MIS } 301 \\ & \text { (p. 308) } \end{aligned}$ | Info Sys in Org |
| $\begin{aligned} & \text { MKT } 301 \\ & \text { (p. 308) } \end{aligned}$ | Prin of Marketing |
| $\begin{aligned} & \text { OPS } 301 \\ & \text { (p. 308) } \end{aligned}$ | Survy-Oper\&Supply Mgt |
| $\begin{aligned} & \text { PHL } 313 \\ & \text { (p. 308) } \end{aligned}$ | Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL) |
| $\begin{aligned} & \text { or REL } 368 \\ & \text { (p. 308) } \end{aligned}$ | Practical wisdom in the business world |
| ECO elective (300/400 level) |  |
| Social Science elective (ANT, POL, PSY, SOC) |  |
| Major Requirements |  |
| DSC 375 | Management Science |
| OPS 350 | Business Process Management |
| OPS 401 | Operations Planning \& Control |
| OPS 480 | Supply Chain Management Strategies |
| OPS 485 | Capstone Operations \& Supply Management Project I (This course and OPS 495 together satisfy CAP Major Capstone.) |
| OPS 495 | Capstone Operations \& Supply Management Project II (This course and OPS 485 together satisfy CAP Major Capstone.) |
| OPS electives |  |

## Academic Electives to bring total to at least 124 credits

Minor in Operations and Supply Management (OPS)
A minor in Operations \& Supply Management consists of 12 hours for students in the School of Business Administration and 21 for nonbusiness students.

| Operations and Supply Management |  |  |
| :--- | :--- | ---: |
| DSC 210 | Statistics for Business I | 3 |
| DSC 211 | Statistics for Business II | 3 |
| DSC 375 | Management Science | 3 |
| OPS 300 | Introduction to Operations \& Supply Management | 3 |
| or OPS 301 | Survey of Operations \& Supply Management |  |
| OPS 350 | Business Process Management | 3 |
| OPS 401 | Operations Planning \& Control | 3 |
| or OPS 480 | Supply Chain Management Strategies |  |
| Select three semester hours from DSC, OPS, MIS, or IET ${ }^{1}$ | 3 |  |
| Total Hours |  | 21 |

[^5]
## Decision Sciences

The Department of Management Information Systems, Operations Management, and Decision Sciences offers courses in several quantitative and systems areas, a major and a minor in management information systems (see MIS), a major and minor in operations and supply management (see OPS), and minors in business analytics, business intelligence and cyber-security.

Decision sciences is the study of analysis, quantitative methodologies, and their application to the functional and behavioral problems of any organization. The major areas of study include applied statistics, operations research, and production and operations management. All business students take three decision sciences and operations management courses as part of their core business coursework:

DSC 210 Statistics for Business I 3
DSC 211 Statistics for Business II 3

OPS 301 Survey of Operations \& Supply Management 3
The minor in business analytics (BAN) offers business majors and other students an opportunity to develop their skills in the quantitative methods which support managerial decision making. A minor in business analytics consists of 21 semester hours for non-business majors and 12 hours for business majors.

Specific courses in other areas (e.g. mathematics) may be used. See chairperson for approval.

## Faculty

Jayesh Prasad, Chairperson
Professor Emeritus and Distinguished Service Professor: Bohlen
Professors Emeriti: Amsden, Casey, Hoffer, Vlahos
Sherman-Standard Register Professor of MIS: Ferratt
Niehaus Chair in Operations Management: Kanet
Professors: Bobrowski, Dunne, Ferratt, Gorman, Kanet, Prasad, Wells
Associate Professors: Enns, Salisbury, Wynn
Assistant Professors: Harrod, Jacobs
Lecturers: Hall, Wagner

## Minor in Business Analytics (BAN)

A minor in Business Analytics (BAN) consists of 12 hours for students in the School of Business Administration and 21 for non-business students.

| Business Analytics (business majors) |  |
| :--- | :--- | ---: |
| DSC 375 Management Science 3 <br> OPS 350 Business Process Management 3 <br> Select six semester hours from DSC, MIS, or OPS (300/400 level) 1,2 6 <br> Total Hours 12  <br> 1 In addition to courses used to satisfy the requirements of any other  |  |
| major or minor. Approval of the department chairperson. |  |
| $2 \quad$OPS majors must select nine additional semester hours instead of <br> six. |  |

## Business Analytics (non-business majors)

| DSC 210 | Statistics for Business I | 3 |
| :--- | :--- | :--- |
| DSC 211 | Statistics for Business II | 3 |
| DSC 375 | Management Science | 3 |
| MIS 300 | Survey of Management Information Systems | 3 |


| or MIS 301 | Information Systems in Organizations |  |
| :--- | :--- | ---: |
| OPS 300 | Introduction to Operations \& Supply Management | 3 |
| or OPS 301 | Survey of Operations \& Supply Management |  |
| OPS 350 | Business Process Management | 3 |
| Select three semester hours from DSC, OPS or MIS (300/400 level) | 3 |  |
| Total Hours | 21 |  |

## Management Information Systems

| First Year | Hours |
| :---: | :---: |
| BAI 150 | 1 |
| BAI 151 | 1 |
| BAI 103L | 1 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP Mathematics) | 3 |
| ENG 100 (CAP Humanities Commons) | 3 |
| HST 103 (CAP Humanities Commons) | 3 |
| PHL 103 (CAP Humanities Commons) | 3 |
| REL 103 (CAP Humanities Commons) | 3 |
| CMM 100 (Satisfies Cap Oral Communication) | 3 |
| CAP Components (generally CAP Arts and CAP Natural Sciences) | 7 |


| Second Year | Hours |
| :--- | ---: |
| ACC 207 | 3 |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ECO 203 | 3 |
| ECO 204 | 3 |
| MIS 305 | 1 |
| MIS 301 | 3 |
| CAP Second Year Writing | 3 |

## Seminar

CAP Social Science 3
CAP Components 3
Third Year Hours
FIN 3013

MGT 2013
MIS 325 4
MIS $380 \quad 3$
MIS $381 \quad 1$
MIS 385 3
OPS 301 3
MKT 3013
MGT 3013

| ENG 370, 371, or 372 <br> (Satisfies CAP Inquiry) <br> CAP Compenents and/or <br> General Electives | 3 |
| :--- | ---: |
|  | 3 |
| Fourth Year | 32 |
| MGT 490 (Satisfies CAP | 3 |
| Integrative) |  |
| MIS 465 |  |
| MIS 475 (Satisfies CAP | 3 |
| Major Capstone) | 3 |
| ECO Upper Elective | 3 |
| PHL 313 or REL 369 | 3 |
| (Satisfies CAP Practical |  |
| Ethical Action and Adv |  |
| Studies in PHL/REL) |  |
| MIS Electives | 6 |
| CAP Components and/or | 9 |
| General Electives |  |
|  | $\mathbf{3 0}$ |

Total credit hours: 124

## Operations management

| First Year | Hours |
| :--- | ---: |
| BAI 150 | 1 |
| BAI 151 | 1 |
| BAI 103L | 1 |
| MTH 128 | 3 |
| MTH 129 (Satisfies CAP | 3 |
| Mathematics) |  |
| ENG 100 (CAP Humanities | 3 |
| Commons) |  |
| REL 103 (CAP Humanities | 3 |
| Common) |  |
| HST 103 (Cap Humanities | 3 |
| Common) |  |
| PHL 103 (CAP Humanities | 3 |
| Common) |  |
| CMM 100 (Satisfies CAP | 3 |
| Oral Communication) |  |
| CAP Components | 10 |
| Second Year | 34 |
| ACC 207 | Hours |
| ACC 208 | 3 |
| DSC 210 | 3 |
| DSC 211 | 3 |
| ECO 203 | 3 |
| ECO 204 | 3 |
| OPS 301 | 3 |
| CAP Second Year Writing | 3 |
| Seminar | 3 |
| CAP Social Science | 3 |


| CAP Components | 3 |
| :---: | :---: |
|  | 30 |
| Third Year | Hours |
| FIN 301 | 3 |
| MGT 301 | 3 |
| MIS 301 | 3 |
| MKT 301 | 3 |
| MGT 201 | 3 |
| DSC 375 | 3 |
| ENG 370, 371, or 372 (Satisfies CAP Inquiry) | 3 |
| OPS Elective | 3 |
| OPS 350 | 3 |
| CAP Components and/or General Electives | 3 |
|  | 30 |
| Fourth Year | Hours |
| MGT 490 (Satisfies CAP Integrative) | 3 |
| PHL 313 or REL 369 (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL) | 3 |
| OPS 401 | 3 |
| OPS 480 | 3 |
| OPS 485 | 1 |
| OPS 495 (Satisfies CAP Major Capstone) | 5 |
| ECO Upper Level Elective | 3 |
| OPS Elective | 3 |
| CAP Components and/or General Electives | 6 |

30
Total credit hours: 124

## Decision Sciences Courses

## DSC 210. Statistics for Business I. 3 Hours

Basic concepts of statistics including descriptive statistics, probability, probability distributions, and estimation. Prerequisite(s): MTH 128, MTH 129; BAI 103L (may be taken as a corequisite).

## DSC 211. Statistics for Business II. 3 Hours

Tests of hypotheses, analysis of variance, Chi-square tests, simple and multiple regression and correlation. Use of computer software for statistical data analysis. Prerequisite(s): BAI 103L; DSC 210; MTH 129.

## DSC 313. Advanced Business Statistics. 3 Hours

Selected topics from advanced statistics with emphasis on business applications. Prerequisite(s): DSC 211 or equivalent.

## DSC 375. Management Science. 3 Hours

Quantitative modeling applications for managerial analysis and decision making. Develops skills to analyze and solve problems using computerbased mathematical modeling in a wide variety of business decision situations involving business functional areas such as accounting, economics, finance, human resources, marketing, management information systems, and operations management. Topics include constrained modeling techniques, simulation, and multi-criteria decision making. Prerequisite(s): DSC 211; OPS 301 (may be taken as a corequisite).

## DSC 410. Decision Theory. 3 Hours

Introduction to the analysis of decisions under uncertainty. Topics include structuring of the decision process, Bayesian decision theory, and multicriteria decision making. Prerequisite(s): DSC 211 or equivalent.
DSC 415. Simulation Modeling \& Analysis. 3 Hours
Introduction to simulation models in support of business decision making.
Emphasis on building and analyzing models in a variety of applications, including manufacturing and service systems. Study and use of a simulation language. Prerequisite(s): DSC 211; DSC 375 recommended.

DSC 435. Analysis of Factory Systems. 3 Hours
Concepts and techniques for the analysis, design, and management of factory production systems. Work-flow layout, scheduling techniques, stochastic process models, simulations, and computerized factory models Prerequisite(s): DSC 375, OPS 301.

## DSC 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## DSC 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## DSC 494. Seminar in Decision Sciences. 3 Hours

Study of selected topics or issues in applied statistics, quantitative business analysis, and production and operations management. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

## DSC 497. Laboratory Work Experience. 1-6 Hours

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization, practical experience in work associated with the student's minor concentration. (See internship coordinator for details.) Does not satisfy MIS elective. Permission of chairperson required. Prerequisite(s): Permission of department chairperson.

## DSC 498. Cooperative Education. 3 Hours

Optional full-time work period off campus alternating with study period on campus. Prerequisite(s): Permission of department chairperson.
DSC 499. Independent Study in Decision Sciences. 1-6 Hours Research in conjunction with a faculty member on a subject within the general area of decision sciences. Normally open only to juniors and seniors who have attained a cumulative grade-point average of 3.0 or above. Permission of chairperson required. Prerequisite(s): Permission of department chairperson.

## Management Info Systems Courses

MIS 220. Exploring Careers in Information Systems. 1 Hour Designed to immerse students into the contemporary issues of management information systems. Site visits and guest lectures from management information systems leaders. Priority given to first and second year students. Satisfactory/No Credit. Prerequisite(s): Permission of department chairperson.

## MIS 300. Survey of Management Information Systems. 3 Hours

 Introduction to management information systems concepts, terminology, purposes, and applications for the nonbusiness student. Not open to students in the School of Business Administration or to those with credit in MIS 301. Permission of department chairperson required. Prerequisite(s): (BAI 103L or HSS 226); junior standing.
## MIS 301. Information Systems in Organizations. 3 Hours

Survey of theory and applications of computer-based information systems in organizations. The role of information in organizational processes, current information technology, decision support systems, and enduser computing and distributed processing systems. Sophomores are encouraged to take this course during their second term. Prerequisite(s): ACC 207;(ACC 208 or ACC 301, (may be taken as a corequisite)); (BAI 103L or HSS 226); ECO 203.

## MIS 302. Systems Thinking. 3 Hours

This course focuses on developing an understanding of systems thinking, decision making, and information systems in organizations. Learning about general systems concepts, system diagramming tools, and different approaches to systems thinking will facilitate examining and interpreting organizations and the information systems used to support decision making and improve the efficiency, effectiveness, and adaptability of organizations. The course will examine the role of information in organizational processes and will include analyzing the suitability of current information systems and technologies for these proc.
MIS 305. Introduction to Business Applications: Problem Solving with Visual Tools. 1 Hour
Introduction to basic programming structures, graphical user interface design, and other tools using a visual programming language such as Visual Basic.net. Prerequisite(s): BAI 103L or equivalent.

## MIS 325. Programming for Business Systems. 4 Hours

Process of software development for business system implementation. Fundamental object-oriented programming concepts include program design, documentation, development, and testing of computer solutions for business problems using a modern programming language, such as Java. Prerequisite(s): MIS 305.

## MIS 360. E-Commerce Processes \& Technology. 3 Hours

Introduction to information systems technologies and techniques that enable business-to-business and business-to-consumer electronic relationships. Development of interactive websites with an introduction to client- and server-side scripting and simple database access. Prerequisite(s): (MIS 300 or MIS 301); (MIS 305 or equivalent); (BAI 103L or equivalent HTML knowledge).

## MIS 366. Business Intelligence. 3 Hours

The use of computer-based data analysis tools to support managers in problem solving and decision making. Prerequisite(s): DSC 211; MIS 301. Corequisite(s): MIS 385.

MIS 368. Principles of Information Security Management. 3 Hours Addresses issues relevant to creating a systematic information assurance, compliance control structure and systematic security procedures. Information security policy, assets, physical and logical information resource security, business continuity, and compliance with relevant security standards are covered. Prerequisite(s): MIS 301.

## MIS 380. Systems Analysis \& Re-Engineering. 3 Hours

Concepts, methods, techniques, and tools needed to initiate a systems development project and to conduct the requirements collection, analysis, and structuring activities of systems development. Structured life cycle and alternatives. Re-engineering business processes through information systems. Prerequisite(s): MIS 300 or MIS 301; MIS 385 (may be taken as a corequisite); Business majors only or permission of department chairperson. Corequisite(s): MIS 381.

## MIS 381. Principles of Project Management. 1 Hour

Introduction to project management concepts and ideas. Possible use of an existing team project from another course to learn principles of scheduling, team management, client management, etc., emphasizing best project management practices. Prerequisite(s): MIS 300 or MIS 301.
MIS 385. Systems Implementation with Database Management Systems. 3 Hours
Concepts, techniques, and tools to convert a logical system design into a working application using a relational DBMS. File and data structures, logical and physical database design, security and data integrity, file design and processing. DBMS functions, SQL, 3GL and 4GL access to databases, linkage to WWW pages, database architectures, CASE. Prerequisite(s): MIS 300 or MIS 301; MIS 305 (may be taken as a corequisite).
MIS 410. Object-Oriented Analysis \& Design. 3 Hours Introduction to object-oriented concepts and techniques for analyzing and designing systems. Systems development project using an objectoriented CASE tool. Prerequisite(s): MIS 301 or permission of instructor; MIS 305 recommended.

MIS 420. Expert \& Knowledge-Based Systems. 3 Hours Introduction to artificial intelligence and expert and knowledgebased systems; knowledge acquisition, implementation, and validation; advanced topics; applications to business. Use of expert system software. Prerequisite(s): BAI 103L or equivalent; DSC 375 recommended.

## MIS 425. Information for Total Quality. 3 Hours

Theory and practice of total quality management (TQM); applications of TQM in the information systems function, information system requirements for TQM programs. Prerequisite(s): MIS 301; OPS 301.
MIS 430. Telecommunications \& Networking-Classified. 3 Hours Introduction to computer-based communication networks, underlying concepts; basic hardware components and operating systems; network architectures and protocols; data integrity and security; message routing; network management. Offered on the ATIC Campus. Prerequisite(s): MIS 368 or permission of instructor; U.S. Department of Defense Interim Secret Clearance or higher.

## MIS 460. Advanced Web Development. 3 Hours

Study of web development concepts and techniques. Design and development of dynamic web-sites using technologies such as ASP.NET. Prerequisite(s): MIS 300 or MIS 301; MIS 305 or equivalent.

## MIS 461. E-Business. 3 Hours

Models of how to conduct business electronically. Topics include different forms of e-business, products and services provided on the Internet, how to combine electronic business with brick-and-mortar business, and keys to success for electronically enhanced businesses. Prerequisite(s): MIS 301.

## MIS 465. MIS Project I-Analysis \& Design in Teams. 3 Hours

First of a two-course sequence. Team participation/management and project management skills. Apply these skills in teams to perform an analysis and preliminary re-design of an existing organization's information system. Emphasis on written and oral communications, including team-prepared reports and presentations. Offered fall semester only. Prerequisite(s): MIS 325, MIS 380, MIS 381, MIS 385.

## MIS 467. Data Warehousing. 3 Hours

Purpose, design, implementation, and effective use of data warehouses and data warehousing technologies. Topics include data warehouse design, data marts, data quality management, extract-transform-load process, and business intelligence. Prerequisite(s): MIS 301, MIS 385.

## MIS 468. Internet Security-Classified. 3 Hours

This course provides students with an understanding of both defensive and offensive issues of information security. The course includes instruction on information security theory, psychological operations, hacking, viruses, and systems management. The course emphasizes security for e-commerce on the Internet. Offered on the ATIC Campus. Prerequisite(s): MIS 430; U.S. Department of Defense Interim Secret Clearance or higher.
MIS 475. MIS Project II-Design \& Implementation in Teams. 3 Hours Continuation of MIS 465. With its organizational client, each team carries its project as far as possible towards final design and actual implementation. Emphasis on written and oral communications, including team-prepared reports and presentations. Offered winter semester only. Prerequisite(s): MIS 465.

## MIS 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## MIS 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.
MIS 494. Seminar in Management Information Systems. 1-4 Hours Study of selected technical and/or organizational issues in information systems. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

## MIS 497. Laboratory Work Experience. 1-6 Hours

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization; practical experience in work associated with the student's major concentration. (See internship coordinator for details.) Prerequisite(s): Permission of department chairperson.

## MIS 498. Cooperative Education. 1-6 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Prerequisite(s): Permission of department chairperson.

## MIS 499. Independent Study in Management Information Systems. 1-6 Hours

Research in conjunction with a faculty member on a subject within the general area of management information systems. Open only to juniors or seniors who have attained a cumulative grade point average of 3.0 or above. Prerequisite(s): Permission of department chairperson.

## Operations Management Courses

OPS 220. Experiences in Operations \& Supply Management. 1 Hour Designed to immerse students into the contemporary issues of operations and supply management. Site visits and guest lectures from operations management leaders. Priority given to first and second year students. Satisfactory/No Credit. Prerequisite(s): Permission of department chairperson.
OPS 300. Introduction to Operations \& Supply Management. 3 Hours Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, services systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Not open to students in the School of Business Administration or to those with credit in OPS 301. Student must show aptitude in quantitative materials. Prerequisite(s): (BAI 103L or equivalent); (MTH 128, MTH 129 or equivalent); junior standing; permission of department chairperson; DSC 211 or equivalent recommended.
OPS 301. Survey of Operations \& Supply Management. 3 Hours Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, service systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Prerequisite(s): DSC 211 (may be taken as a corequisite).

## OPS 350. Business Process Management. 3 Hours

Analytical and empirical tools for evaluation of operations in manufacturing/service firms. Analytical methods may include flow diagrams, Little's Law, queuing theory, theoretical flow times, critical paty networks, resource capacity, and estimates of system flow. Empirical methods include quality sampling and discrete event simulation. Students receive training in Rockwell Arena simulation software. Projects or case studies require creative problem solving for realist business problems. Prerequisite(s): DSC 211; OPS 301 (may be taken as a corequisite); Business majors only or permission of department chairperson.

## OPS 401. Operations Planning \& Control. 3 Hours

Concepts and techniques in the planning and control of operations. Advanced treatment topics include: forecasting for operations, operations sequencing and scheduling, inventory and production control, production planning system design, MRP/ERP, warehouse management, purchasing and physical distribution, balanced attention to technical as well as the managerial aspects of operations planning and control. Prerequisite(s): DSC 211; DSC 375 (may be taken as a corequisite); OPS 301.

## OPS 413. Project Management. 3 Hours

Broad coverage of technical and human management issues in projects. Emphasis on project planning, scheduling, tracking, and close-down. Task time and cost estimation and description. Use of computer software. Team building and other aspects of managing project teams. Prerequisite(s): OPS 301.
OPS 430. Quality \& Just in Time Manufacturing. 3 Hours
The concepts of just-in-time manufacturing, total quality system, and statistical process control. Projects, tours, and guest speakers. Prerequisite(s): OPS 301.

## OPS 440. Continuous Improvement. 3 Hours

Theory and practice of continuous improvement especially as applied in manufacturing; comparison to the traditional operations management approach, tools and techniques, the KAIZEN approach. Prerequisite(s): OPS 301.
OPS 480. Supply Chain Management Strategies. 3 Hours
Concepts, analytical techniques, and solution methods for designing and managing integrated supply chains. Strategic issues of integrated supply chain design and management, including inventory management, logistics network design, distribution systems, strategic alliances, value of information for centralized decisions and risk-pooling, information technology and decision support, and international supply chain management. Prerequisite(s): DSC 211; DSC 375 (may be taken as a corequisite); OPS 301; OPS 350 (may be taken as a corequisite).
OPS 485. Capstone Operations \& Supply Management Project I. 1 Hour
This course centers on the preparation for an experiential operations improvement project. Students evaluate real-world project proposals from clients, develop clear understanding of operations improvement opportunities, and select projects at hand. Student teams learn about process improvement project design and develop well-defined project plans for execution in OPS 495. Students taking OPS 485 in the fall must take OPS 495 in the subsequent winter semester. Prerequisite(s): Permission of instructor.

## OPS 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent and original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

## OPS 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original, research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.
OPS 494. Seminar in Operations \& Supply Management. 3 Hours
Study of selected topics or issues in operations management. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

## OPS 495. Capstone Operations \& Supply Management Project II. 5 Hours

This course centers on the execution of an experiential project applying operations management concepts and techniques to practical problems with faculty supervision. Student teams address significant operational problems and opportunities in real-world service and manufacturing firms. Teams write recommendation/implementation reports and make presentations of their work. Prerequisite(s): OPS 401, OPS 480, OPS 485.

## OPS 497. Laboratory Work Experience. 1-6 Hours

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, government, or other organization, practical experience in work associated with the student's major. (See internship coordinator for details.) May satisfy OPS elective, with chairperson approval.

## OPS 498. Cooperative Education. 1-6 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details). Permission of chairperson required.

## OPS 499. Independent Study in Operations \& Supply Management. 1-6 Hours

Research in conjunction with a faculty member on a subject within the general area of operations management. Normally open only to juniors and seniors who have attained a cumulative grade-point average of 3.0 or above. Permission of chairperson required.

# Undergraduate - School of Education and Health Sciences 

Kevin R. Kelly Dean<br>Kathryn Kinnucan-Welsch, Associate Dean for Undergraduate Learning and Community Partnerships<br>Barbara De Luca, Associate Dean for Graduate Education and Research Jayne Brahler, Interim Associate Dean for Graduate Health Programs<br>In conformity with the University's mission, the School of Education and Health Sciences (SEHS) endeavors to educate distinctive graduates who will effectively and efficiently utilize the highest quality of learning and scholarship and engage people in building strong learning communities and in developing collaborative, dynamic partnerships. The SEHS programs focus on distinctive Catholic and Marianist educational and intellectual traditions which enable graduates to become effective practitioners in the field of professional education and the health sciences. The theme for the SEHS is "Building Learning Communities Through Critical Reflection".

As a community of learners, collaboration and critical reflection is fostered and encouraged through efforts to integrate and connect knowledge, skills and dispositions gained from various courses in the SEHS and the liberal arts, including the Common Academic Program. This acquaints the students with the major areas of knowledge and provides the basis for their specific program of study. The SEHS is particularly noted for the professional development of teachers and health science professionals who are able to enhance the quality of life experiences for both children and adults. In relation to teaching, the school is committed to quality programs which address the professional preparation of teachers for the early, middle, and secondary schools and intervention specialists. In relation to the health sciences, the school is committed to quality programs which address the professional preparation for specialists in exercise science and fitness management, sport management, prephysical therapy, and food and nutrition. Provisions for professional competence are made through:

1. Comprehensive study of the various fields
2. Study of the professional foundations common to all of the program areas
3. Specialized study of the principles underlying a particular area of study
4. Appropriate field-based experiences

Students in the SEHS should appraise their commitment to teaching and the health science professions according to their development in specific knowledge, skills, and dispositions. Students will have opportunities to apply theory to practice in planned and supervised field-based experiences. Their programs of study will include reflective practice which will incorporate inquiry leading to self improvement.

The SEHS is committed:

- to education for the improvement of others and society
- to the principles that refer to a shared common humanity
- to the dignity of the person and the use of reason and cooperation in seeking social justice
- to the democratic principles
- to a humanistic approach to learning; and
- to the Marianist traditions in education


## Academic Programs

The SEHS offers the following majors leading to the Bachelor of Science in Education and Health Sciences degree. Additional information specific to each department, including certificate and endorsement programs, may be found under the Programs of Study tab.

## Department of Health and Sport Science

Dietetics (p. 319)
Exercise Physiology (p. 320)
Exercise Science (p. 319)
Nutrition and Fitness (p. 323)
Pre-Physical Therapy (p. 324)
Sport Management (p. 325)

## Department of Teacher Education

Adolescence to Young Adult Education (p. 329)
Early Childhood Education (p. 330)
Early Childhood Leadership and Advocacy (p. 332)
Foreign Language Education (Multi-Age PK-12) (p. 332)
Intervention Specialist (Special Education) (p. 333)
Middle Childhood Education (p. 334)
Secondary Catholic Religious Education (p. 335)
Students who major in the College of Arts and Sciences can also earn a teaching license (p. 117).

## Degree Requirements

To be awarded the bachelor's degree by the School of Education and Health Sciences, it is necessary to complete all requirements as stipulated by the catalog and department policy. The final 30 semester hours must be earned at the University of Dayton.

## Licensure for Students in Arts and Sciences

## B.A. or B.S. with Teacher Licensure

Students in the College of Arts and Sciences may be able to complete the requirements for a teaching license without transferring to the School of Education and Health Sciences. For additional information regarding this option consult the Dean's office in the College of Arts and Sciences.

Enrollment, continuation, and successful completion in this program are subject to the same admission requirements, advising, maintenance of a unified system of records, screening, and other professional expectations of students in the School of Education and Health Sciences working toward the B.S. in Education and Health Sciences.

In order to complete all requirements in four years, a student in the College of Arts and Sciences should process an application for admission to the appropriate licensure program during the second semester of enrollment to begin the professional education sequence. Screening will be completed by the SEHS transfer official. The requirements for the College of Arts and Sciences, the School of Education and

Health Sciences, and licensure program concentration courses must be completed in order to be eligible for licensure recommendation. It is possible for students to earn dual degrees in the College of Arts and Sciences and School of Education and Health Sciences.

## Transfer Students

The School of Education and Health Sciences welcomes transfer students into our programs. Students should contact either the SEHS Student Services and Licensure Office or the Departments of Health and Sport Science and Teacher Education for additional information.

## Programs of Study

To learn more about the available programs in the School of Education and Health Sciences,
explore the departments.

- Health and Sport Science (p. 319)
- Teacher Education (p. 329)


## Health and Sport Science

Majors:

- Bachelor of Science in Education and Health Sciences, Dietetics (p. 319)
- Bachelor of Science in Education and Health Sciences, Exercise Physiology (p. 320)
- Bachelor of Science in Education and Health Sciences, Exercise Science (p. 321)
- Bachelor of Science in Education and Health Sciences, Nutrition and Fitness (p. 323)
- Bachelor of Science in Education and Health Sciences, Pre-Physical Therapy (p. 324)
- Bachelor of Science in Education and Health Sciences, Sport Management (p. 325)

The undergraduate mission of the Department of Health and Sport Science is to prepare students to be proficient and professional in the disciplines of dietetics and nutrition, exercise physiology, exercise science, pre-physical therapy, and sport management.

The Dietetics and Nutrition Programs prepare students for postbaccalaureate dietetic internships or pre-professional practice programs.

Exercise Physiology students prepare to pursue research careers in exercise science, medicine, or health.

The Exercise Science Program is designed to prepare students for professional opportunities in corporate fitness, wellness and health maintenance programs in a variety of settings.

The Pre-Physical Therapy Program will prepare students for graduate school in physical therapy and other allied health professions.

The Sport Management Program prepares students for professional opportunities in:

- Division I and professional sports
- Sports organizations/federations
- Newspapers
- Television
- Sporting goods
- And the many areas of recreation

Along with minimum ACT/SAT scores, minimum cumulative GPAs are required for students wishing to transfer into the department.

## Faculty

Lloyd L. Laubach, Chairperson
Professors Emeriti: Drees, Leonard, Roberts, Schleppi, Siciliano
Professor: Titlebaum
Associate Professors: Daprano, DeMarco, Laubach, Linderman
Assistant Professors: Crecelius, Cuy Castellanos
Lecturers: Dalton, Gallo, Ritterhoff

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Dietetics (EHA) minimum of 127 credit hours

This program, which leads to a Bachelor of Science degree, prepares students who wish to become registered dietitians. It has a strong science component.

During the last semester of their senior year, students make application to a dietetic internship program. These post-baccalaureate programs are usually eight to eleven months in length and will qualify the student to sit for examination to become registered dieticians. Acceptance into the internship program is highly competitive and is based on the student's grades, work experience, recommendation letters, and extra curricular activities. Selection is made through computer matching.

Costs of the didactic program in dietetics may also include laboratory fees, the purchase of a lab coat, and membership fees for the Student Dietetic Association and the Academy of Nutrition and Dietetics. No liability insurance is needed since the students in this program do not participate in a practice setting.

The didactic program in dietetics is currently granted initial accreditation by the Commission on Accreditation for Dietetics Education (CADE), Suite 2000, 120 South Riverside Plaza, Chicago, Illinois 60606, Phone: (900) 877-1600.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |

Second-Year Writing Seminar ${ }^{3}$ 0-3
ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3

| Natural Scien |  | 7 | HSS 428 | Research in Physical Activity \& Health | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Crossing Boundaries |  | variable | HSS 439 | Professional Seminar in Dietetics | 2 |
|  |  | credit | HSS 456 | Nutritional Biochemistry II | 3 |
| Faith Traditions |  |  | HSS 495 | Medical Nutrition Therapy I | 3 |
| Practical Ethical Action |  |  | HSS 496 | Medical Nutrition Therapy II (Satisfies CAP | 3 |
| Inquiry |  |  |  | Capstone) |  |
| Integrative |  |  | HST 341 | Historical Perspectives on Science, Technology \& | 3 |
| Advanced Study |  | variable |  | Society (Satisfies CAP Adv Studies in HST) |  |
|  |  | credit | or HST 344 | History of Science, Technology \& the Modern |  |
| Philosophy and/or Religious Studies |  |  |  | Corporation |  |
| Historical Studies |  |  | or HST 355 | American Urban History |  |
| Diversity and Social Justice |  | 3 | or HST 376 | Social \& Cultural History of the United States |  |
| Major Capstone |  | 0-3 | MGT 301 | Organizational Behavior | 3 |
|  |  |  | or HSS 356 | Human Resources Management in Sport |  |
| 1 Completed with ASI 110 and ASI 120. |  |  | MTH 207 | Introduction to Statistics (Satisfies CAP | 3 |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |  |  | Mathematics) |  |
| 3 Completed with ENG 200H or ASI 120. |  |  | PHL 312 | Ethics (Any satisfies CAP Practical Ethical Action and Adv Studies in REL/PHL ) | 3 |
| Major Requirements |  |  | or PHL 313 | Business Ethnics |  |
| ACC 200 | Introduction to Accounting | 3 | or PHL 315 | Medical Ethics |  |
| ANT 150 | Cultural Anthropology | 3 | or REL 360 | Christian Ethics |  |
| BIO 151 | Concepts of Biology I: Cell \& Molecular Biology (Satisfies CAP Natural Sciences) | 3 | or REL 367 | Christian Ethics \& Health Care Issues |  |
| BIO 152 | Concepts of Biology II: Evolution \& Ecology | 3 | PSY 101 |  | 3 |
| BIO 411 | General Microbiology | 3 | PSY 431 | Interviewing \& Counseling | 3 |
| $\begin{aligned} & \text { CHM } 123 \\ & \& 123 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory (Satisfies CAP Natural Sciences) | 4 | CAP Arts Elective |  | 3 |
|  |  |  | CAP REL/Faith Traditions Elective |  | 3 |
| $\begin{aligned} & \text { CHM } 124 \\ & \& 124 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 | Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in |  |  |
| CHM 313 | Organic Chemistry | 3 |  |  |  |
| ENG 370 | Report \& Proposal Writing (Any satisfies CAP Inquiry) | 3 | Exercise Physiology (EEP) minimum of 131 credit hours |  |  |
| or ENG 371 <br> or ENG 372 <br> or ENG 373 | Technical Communication |  |  |  | With its increased emphasis on the sciences, this program is more appropriate for students interested in pursuing research careers in exercise science, medicine, or health (M.S., Ph.D. degrees). |
|  | Business Communication |  |  |  |  |
|  | Medical Writing |  |  |  |  |
| HSS 101 | Introduction to the University Experience | 1 | Common Academic Program (CAP) |  |  |
| HSS 113 | Introduction to Dietetics \& Nutrition | 2 |  |  |  |  |
| HSS 210\& 210 L | Introductory Foods and Introductory Foods Laboratory | 4 | *credit hours will vary depending on courses selected |  |  |
|  |  |  | First-Year Humanities Commons ${ }^{1}$ |  | 12 |
| HSS 295 | Nutrition \& Health (Satisfies CAP Integrative) | 3 | HST 103 | The West \& the World |  |
| HSS 302 | Global \& Cultural Nutrition (Satisfies CAP Diversity and Social Justice) | 3 | REL 103 | Introduction to Religioius \& Theological Studies |  |
|  |  |  | PHL 103 | Introduction to Philosophy |  |
| HSS 303 | Food Service Systems Management | 2 | ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| HSS 304 | Institutional Quantity Food Buying | 3 | Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| HSS 305 | Human Anatomy | 3 |  |  |  |
| HSS 305L | Human Anatomy Laboratory | 1 | ENG 200 Writing Seminar II |  |  |
| HSS 307 | Human Physiology | 3 | Oral Communication |  | 3 |
| HSS 345 | Medical Evaluation \& Terminology | 3 | CMM 100 | Principles of Oral Communication |  |
| HSS 401 | Nutritional Biochemistry I | 3 | Mathematics |  | 3 |
| HSS 402 | Nutrition for the Aging Adult |  | Social Science |  | 3 |
| HSS 406 | Nutrition for Mother \& Child 2 |  | Arts |  | 3 |
| HSS 408 |  |  | Natural Sciences |  | 7 |
| \& 408L |  |  | Crossing Boundaries |  |  |


|  |  |  | HSS 422 | Exercise for Special Populations |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Faith Traditions |  | HSS 428 | Research in Physical Activity \& Health |  |



## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Nutrition and Fitness (EHN) minimum of 125 credit hours

This program offers classes from both the nutrition and exercise curriculum. Those who select the EHN major may take additional classes to qualify them to apply for a dietetic internship following graduation. Students may also fulfill medical or dental schools' requirements with this program.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |

ENG 200 Writing Seminar II
Oral Communication

| CMM 100 | Principles of Oral Communication |
| ---: | ---: |
| Mathematics | 3 |

Social Science 3
Arts 3
Natural Sciences 7

| Crossing Boundaries | variab |
| :--- | :--- |
|  | credit |


| Faith Traditions |  |
| :--- | ---: |
| Practical Ethical Action |  |
| Inquiry | varia |
| Integrative | credit |
| Advanced Study |  |
| Philosophy and/or Religious Studies | 3 |
| Historical Studies | $0-3$ |
| Diversity and Social Justice |  |
| Major Capstone |  |

1 Completed with ASI 110 and ASI 120 .
2 Or ENG 100A and ENG 100B, or ENG 200 H , by placement.
3 Completed with ENG 200 H or ASI 120 .

## Major Requirements

$\left.\begin{array}{llc}\begin{array}{l}\text { ACC 200 } \\ \text { (p. 319) }\end{array} & \text { Intro to Accounting } & 3 \\ \begin{array}{l}\text { BIO 151 } \\ \text { (p. 319) }\end{array} & \text { Concepts of Bio I (Satisfies CAP Natural Sciences) }\end{array}\right) 3$

CHM 123
(p. 319)
\& 123L (p. 319)
CHM 124
(p. 319)
\& 124L (p. 319)
ENG 370
(p. 319)
or ENG 371
(p. 319)
or ENG 372
(p. 319)
or ENG 373
(p. 319)

HSS 101 Intro-Univ Exper
(p. 319)

HSS 112 Intro-Exer Sci\&Ftnss 2
(p. 319)

HSS 113 Intro-Dietcs/Nutrn 2
(p. 319)

HSS 275
(p. 319)

HSS 295
(p. 319)

HSS 302
(p. 319)

HSS 305
(p. 319)
\& 305L (p. 319)
HSS 307
(p. 319)
\& 307L (p. 319)
HSS 320
(p. 319)

HSS 345
(p. 319)

HSS 356
(p. 319)

HSS 357 Sports Marketing 3
(p. 319)
or MKT 300
(p. 319)
HSS $402 \quad$ Nutritn-Aging Adult 2
(p. 319)

HSS $406 \quad$ Nutrtn for Mthr/Child 2
(p. 319)

HSS 405
(p. 319)

HSS 408
(p. 319)
\& 408L (p. 319)
HSS 422
(p. 319)

HSS 428 Rsch in Phys Act\&HIth 3
(p. 319)

HSS $431 \quad$ Nutritn-Exr\&Sprt Sc 3

| $\begin{aligned} & \text { HSS } 448 \\ & \text { (p. 319) } \end{aligned}$ | Safty\&Law- PE Sports | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { HSS } 490 \\ & \text { (p. 319) } \end{aligned}$ | Exer Sci Internship (Satisfies CAP Capstone) | 2 |
| $\begin{aligned} & \text { HSS } 491 \\ & (\text { p. 319) } \end{aligned}$ | Exer Sci Internship | 1-3 |
| $\begin{aligned} & \text { MTH } 207 \\ & \text { (p. 319) } \end{aligned}$ | Intro to Statistics (Satisfies CAP Mathematics) | 3 |
| $\begin{aligned} & \text { PHL } 312 \\ & \text { (p. 319) } \end{aligned}$ | Ethics (Any satisfies CAP Practical Ethical Action and Adv Study in REL/PHL) | 3 |
| $\begin{aligned} & \text { or PHL } 313 \\ & \text { (p. 319) } \end{aligned}$ | Business Ethics |  |
| $\begin{aligned} & \text { or PHL } 315 \\ & \text { (p. 319) } \end{aligned}$ | Medical Ethics |  |
| $\begin{aligned} & \text { or REL } 360 \\ & \text { (p. 319) } \end{aligned}$ | Christian Ethics |  |
| $\begin{aligned} & \text { or REL } 367 \\ & \text { (p. 319) } \end{aligned}$ | Chr Ethics\&HIth Care |  |
| $\begin{aligned} & \text { or REL } 368 \\ & \text { (p. 319) } \end{aligned}$ | Practical wisdom in the business world |  |
| $\begin{aligned} & \text { PSY } 101 \\ & \text { (p. 319) } \end{aligned}$ | Introductory Psych | 3 |
| $\begin{aligned} & \text { PSY } 251 \\ & \text { (p. 319) } \end{aligned}$ | Hum Growth \& Develop | 3 |
| CAP Arts Elective |  | 3 |
| CAP REL/Fa | raditions Elective | 3 |

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in PrePhysical Therapy (ept) minimum of 126 credit hours

The Pre-Physical Therapy program is focused on preparing students for entrance to graduate programs in physical therapy. It is designed to optimize graduates' chances of being accepted into some of the top physical therapy schools in the country. These graduate programs are highly selective, and both the undergraduate curriculum and the student's performance are considered in this competitive screening. Employment opportunities for physical therapists are growing faster than any other segment of the healthcare industry. Because of the depth and breadth of the curriculum, a graduate will also have preparation for careers in fitness management and sports rehabilitation.


| Arts | 3 |
| :---: | :---: |
| Natural Sciences | 7 |
| Crossing Boundaries | variable <br> credit |
| Faith Traditions |  |
| Practical Ethical Action |  |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable <br> credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 Completed with ENG 200H or ASI 120. |  |

## Major Requirements


BIO 151
(p. 319)

BIO 151L
Concepts-Bio Lab I
1
(p. 319)

BIO 152 Concepts of Bio II 4
(p. 319) and Concepts-Bio Lab II
\& 152L (p. 319)
BIO 309
(p. 319)

CHM 123
(p. 319)
\& 123L (p. 319)
and Gen Chemistry Lab (Satisfies CAP Natural
Sciences)
General Chemistry 4
and Gen Chemistry Lab
(p. 319)
\& 124L (p. 319)
CHM $313 \quad$ Organic Chemistry 4
(p. 319) and Organic Chemistry Lab (Satisfies CAP Inquiry)
\& 313L (p. 319)
HSS 101
Intro-Univ Exper
1
(p. 319)

HSS 114 Intro to Phys Thrpy 1
(p. 319)

HSS 121
(p. 319)

HSS 220 Adaptve Phys Actvty 3
(p. 319)

HSS $275 \quad$ Hist-PE \& Sport (Satisfies CAP Adv Study in HST 3
(p. 319) and Diversity and Social Justice)

HSS 295 Nutrition \& Health (Satisfies CAP Integrative) 3
(p. 319)

HSS 305 Human Anatomy 4
(p. 319) and Human Anatomy Lab
\& 305L (p. 319)
HSS 307 Human Physiology 4
(p. 319) and Human Physiology Lab
\& 307L (p. 319)

| $\begin{aligned} & \text { HSS } 320 \\ & \text { (p. 319) } \end{aligned}$ | Essen/Strength Cond | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { or HSS } 321 \\ & \text { (p. 319) } \end{aligned}$ | Essentials of Personal Training |  |
| $\begin{aligned} & \text { or HSS } 422 \\ & \text { (p. 319) } \end{aligned}$ | Exer-Spec Populatns |  |
| $\begin{aligned} & \text { or HSS } 431 \\ & \text { (p. 319) } \end{aligned}$ | Nutritn-Exr\&Sprt Sc |  |
| $\begin{aligned} & \text { HSS } 335 \\ & \text { (p. 319) } \end{aligned}$ | Intro-Athletic Trng | 3 |
| $\begin{aligned} & \text { HSS } 345 \\ & \text { (p. 319) } \end{aligned}$ | Med Eval \& Terminlgy | 3 |
| $\begin{aligned} & \text { HSS } 405 \\ & \text { (p. 319) } \end{aligned}$ | Tsts\&Measrmnts-Sp Sc | 3 |
| $\begin{aligned} & \text { HSS } 408 \\ & \text { (p. 319) } \\ & \& 408 \mathrm{~L}(\text { p. 319) } \end{aligned}$ | Physiology-Exercise and Physiology Ex Lab | 4 |
| $\begin{aligned} & \text { HSS } 409 \\ & \text { (p. 319) } \\ & \text { \& 409L (p. 319) } \end{aligned}$ | Kinesiology and Kinesiology Lab | 4 |
| $\begin{aligned} & \text { HSS } 428 \\ & \text { (p. 319) } \end{aligned}$ | Rsch in Phys Act\&Hlth | 3 |
| $\begin{aligned} & \text { HSS } 465 \\ & \text { (p. 319) } \end{aligned}$ | Phys Therapy Seminar (Satisfies CAP Capstone) | 3 |
| MTH 148 <br> (p. 319) | Introductory Calc I | 3 |
| MTH 207 <br> (p. 319) | Intro to Statistics (Satisfies CAP Mathematics) | 3 |
| $\begin{aligned} & \text { PHL } 312 \\ & \text { (p. 319) } \end{aligned}$ | Ethics (Any satisfies CAP Practical Ethical Action and Adv Study in REL/PHL) | 3 |
| $\begin{aligned} & \text { or PHL } 313 \\ & \text { (p. 319) } \end{aligned}$ | Business Ethics |  |
| $\begin{aligned} & \text { or PHL } 315 \\ & \text { (p. 319) } \end{aligned}$ | Medical Ethics |  |
| $\begin{aligned} & \text { or REL } 360 \\ & \text { (p. 319) } \end{aligned}$ | Christian Ethics |  |
| $\begin{aligned} & \text { or REL } 367 \\ & \text { (p. 319) } \end{aligned}$ | Chr Ethics\&HIth Care |  |
| $\begin{aligned} & \text { or REL } 368 \\ & \text { (p. 319) } \end{aligned}$ | Practical wisdom in the business world |  |
| PHY 201 (p. 319) \& 201L (p. 319) | General Physics and General Physics Lab | 4 |
| $\begin{aligned} & \text { PHY } 202 \\ & \text { (p. 319) } \\ & \text { \& 202L (p. 319) } \end{aligned}$ | General Physics and General Physics Lab | 4 |
| $\begin{aligned} & \text { PSY } 101 \\ & \text { (p. 319) } \end{aligned}$ | Introductory Psych | 3 |
| $\begin{aligned} & \text { PSY } 251 \\ & \text { (p. 319) } \end{aligned}$ | Hum Growth \& Develop | 3 |
| $\begin{aligned} & \text { PSY } 363 \\ & \text { (p. 319) } \end{aligned}$ | Abnormal Psychology | 3 |
| $\begin{aligned} & \text { SOC } 101 \\ & \text { (p. 319) } \end{aligned}$ | Prin of Sociology | 3 |
| CAP Arts Elective |  | 3 |
| CAP REL/Faith Tr | raditions Elective | 3 |

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Sport Management (esm) minimum of 126 credit hours

The Sport Management program prepares students for opportunities in sport, event, and facility management. In particular, Sport Management professionals gain positions in collegiate and professional organizations, sport clubs, and athletic federations, as well as public and private recreation. Opportunities are also available in arenas and convention centers, event management, and all forms of media.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad$ 0-3
ENG $200 \quad$ Writing Seminar II
Oral Communication 3
CMM $100 \quad$ Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7
$\begin{array}{ll}\text { Crossing Boundaries } & \text { variable } \\ \text { credit }\end{array}$

| Faith Traditions |  |
| :--- | :--- |
| Practical Ethical Action |  |
| Inquiry | variable |
| Integrative | credit |

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## Major Requirements

| $\begin{aligned} & \text { HSS } 101 \\ & \text { (p. 319) } \end{aligned}$ | Intro-Univ Exper | 1 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { HSS } 111 \\ & \text { (p. 319) } \end{aligned}$ | Intro-Sport Mangmnt | 3 |
| $\begin{aligned} & \text { HSS } 250 \\ & \text { (p. 319) } \end{aligned}$ | Prin of Sport Mngmnt | 3 |
| $\begin{aligned} & \text { HSS } 253 \\ & \text { (p. 319) } \end{aligned}$ | Sport Facility Ops | 3 |


| $\begin{aligned} & \text { HSS } 255 \\ & \text { (p. 319) } \end{aligned}$ | Sports Mgt Practicm | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { HSS } 285 \\ & \text { (p. 319) } \end{aligned}$ | Sprts Mgt Field Expr | 3 |
| $\begin{aligned} & \text { HSS } 330 \\ & \text { (p. 319) } \end{aligned}$ | Leadership in Sport | 3 |
| $\begin{aligned} & \text { HSS } 331 \\ & \text { (p. 319) } \end{aligned}$ | Sport Ethics | 3 |
| $\begin{aligned} & \text { HSS } 349 \\ & \text { (p. 319) } \end{aligned}$ | Financng Sprt Opertns | 3 |
| $\begin{aligned} & \text { HSS } 350 \\ & \text { (p. 319) } \end{aligned}$ | Business of Soccer | 3 |
| $\begin{aligned} & \text { HSS } 353 \\ & \text { (p. 319) } \end{aligned}$ | Sports Media | 3 |
| $\begin{aligned} & \text { HSS } 354 \\ & \text { (p. 319) } \end{aligned}$ | Sprt-Global Communty (Satisfies CAP Diversity and Social Justice) | 3 |
| $\begin{aligned} & \text { HSS } 356 \\ & \text { (p. 319) } \end{aligned}$ | HR Managemnt in Sprt | 3 |
| $\begin{aligned} & \text { HSS } 357 \\ & \text { (p. 319) } \end{aligned}$ | Sports Marketing | 3 |
| $\begin{aligned} & \text { HSS } 358 \\ & \text { (p. 319) } \end{aligned}$ | Sales\&Fundrsng Sport | 3 |
| $\begin{aligned} & \text { HSS } 360 \\ & \text { (p. 319) } \end{aligned}$ | CAP Pilot. Sport and Bodies | 3 |
| $\begin{aligned} & \text { HSS } 448 \\ & \text { (p. 319) } \end{aligned}$ | Safty\&Law- PE Sports | 3 |
| $\begin{aligned} & \text { HSS } 485 \\ & \text { (p. 319) } \end{aligned}$ | Sport Mgt Internship (Satisfies CAP Capstone) | 3 |
| CPS 111 <br> (p. 319) | Intro-Personal Comp | 3 |
| MTH 207 <br> (p. 319) | Intro to Statistics (Satisfies CAP Mathematics) | 3 |
| Courses in Business Minor |  | 18 |
| Courses in | sional Competency | 12 |

## Courses

HSS 101. Introduction to the University Experience. 1 Hour
Examination of the values that foster academic progress in the College, discussion of strategies for taking full advantage of academic opportunities, and integrating formal and experiential learning.

## HSS 111. Introduction to Sport Management. 3 Hours

Course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for a sport management career.

## HSS 112. Introduction to Exercise Science \& Fitness Management. 2 Hours

Course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for an exercise science and fitness management career.

## HSS 113. Introduction to Dietetics \& Nutrition. 2 Hours

To acquaint the students interested in a career in dietetics or nutrition with the professions, roles, responsibilities, and opportunities afforded them. Examples of practice for each area will be explored. Required by all entering first-year students and open to students interested in food and nutrition careers.

HSS 114. Introduction to Physical Therapy. 1 Hour
An introductory seminar discussing the history, present and future, of physical therapy. A successful undergraduate preparation for entrance into this highly selective graduate program will be this field's secondary focus.

## HSS 117. Personal \& Community Health. 3 Hours

Survey of health science and principles of preventive medicine as introduction to other courses in health and sport science.

## HSS 121. Fitness for Life. 2 Hours

This course will include a combination of classroom lectures covring numerous topics pertaining to health related fitness as well as laboratory activity sessions implementing concepts that foster a healthy, active lifestyle.

## HSS 130. Physical Education Activities. 1 Hour

Selected courses offered to all University students.
HSS 182. Aerobic Conditioning. 2 Hours
Aerobic conditioning techniques developed primarily through running programs. Required for EES and EDP majors.
HSS 184. Conditioning. 1 Hour
Course designed for Exercise Science and Pre-Physical Therapy majors to introduce them to concepts and techniques of aerobic conditioning using exercise devices such as treadmills, bicycle ergometers, stairmasters, rowing machines, etc.

HSS 210. Introductory Foods. 2 Hours
Study of scientific principles applied to the processing and preparation of food to maintain nutritional quality and aesthetic value. Corequisite(s): HSS 210L.
HSS 210L. Introductory Foods Laboratory. 2 Hours
Course to accompany HSS 210 lecture. Corequisite(s): HSS 210.
HSS 220. Adapted Physical Activity. 3 Hours
Course to prepare prospective teachers to adapt a physical education program so all children and youth can successfully participate in activity programs. Study of the atypical child in order to organize and administer a program which will meet individual needs.

## HSS 226. Computer Applications in Sport Science. 3 Hours

The course focuses on understanding the practical uses of computers as a tool in exercise science and sport management activities. Emphasis is placed on demonstrated proficiency in word processing, spreadsheets, graphics, Power Point, and databases and the evaluation and use of specific exercise science and sport management packages. Emphasis will be on use of IBM compatible computers.

## HSS 250. Principles of Sport Management. 3 Hours

Examination of the nature of management from theoretical and practical perspectives in a variety of sport settings. Focus on managerial functions and skills. Prerequisite(s): HSS 111.

## HSS 253. Sport Facility Operations. 3 Hours

The processes of planning, constructing, equipping, maintaining, and operating sport facilities are investigated in this course.

## HSS 255. Sport Management Practicum. 3 Hours

The sport management practicum and seminar is designed for students to gain insight into a wide array of field experiences within this discipline. Students are given choices of field work within a variety of sport and recreation settings. In addition, a weekly seminar is required as part of the practicum experience.
HSS 275. History of Physical Education \& Sport. 3 Hours
Study of the historical development of physical education and sport as it relates to significant events in the history of Western civilization.

## HSS 285. Sport Management Field Experience. 3 Hours

This experience is done after completion of HSS 255.150 clock hours need to be completed for the 3 semester hour experience.
HSS 295. Nutrition \& Health. 3 Hours
Study of the nutrient needs of humans and of their choices as modified by socioeconomic, cultural, and life cycle factors.
HSS 302. Global \& Cultural Nutrition. 3 Hours
Study of the relationship among consumers, the food; the historical evolution of food; socioeconomic influences on food.
HSS 303. Food Service Systems Management. 2 Hours
Study of food service organizations and management. Demonstrate the importance of menu as the primary control of the food service system factors affecting menu planning, customer satisfaction, and management decisions.

## HSS 304. Institutional Quantity Food Buying. 3 Hours

To study quantity food production in foodservice system through application of principles for determining needs and procuring, producing and storing foods in quantity, along with institutional equipment selection, maintenance, and layout. Prerequisite(s): HSS 210, HSS 210L; a Multipurpose Computer Account (AKA Dial-in/PPP/Flyernet account); basic IBM compatible computer skills.
HSS 305. Human Anatomy. 3 Hours
Study of the human body with emphasis on the interdependent relationships of structure and function.

## HSS 305L. Human Anatomy Laboratory. 1 Hour

Hands-on study of the human body with emphasis on the interdependent relationships of structure and function through the use of interactive anatomy.

## HSS 307. Human Physiology. 3 Hours

Survey of the functions of body systems with respect to general cell physiology and specialization into tissues, structural contributions to tissue/organ physiology, pertinent concepts of biochemical physiology, tissue metabolism and energy/food requirements during stress and exercise, recent research into control and regulation of functions of major systems, physiologic limitations outside environmental ranges, and selected examples of pathophysiology. Prerequisite(s): CHM 123, CHM 124; HSS 305. Corequisite(s): HSS 307L.

## HSS 307L. Human Physiology Laboratory. 1 Hour

Virtual human physiological laboratory course meant to enhance the materials covered in HSS 307 - Human Physiology. Laboratory simulations in human physilogy to cover concepts such as, but not limited to, cell transport mechanisms and permeability, skeletal muscle physiology, endocrine system physiology, cardiovascular dynamics, cardiovascular physiology, respiratory system mechanics, renal system physiology, and blood analysis. Prerequisite(s): BIO 151, BIO 152; (CHM 123, CHM 124) or equivalent; HSS 305. Corequisite(s): HSS 307.

## HSS 320. Essentials of Strength Conditioning. 3 Hours

Course designed to prepare students for the certified strength and conditioning specialist (NSCA) exam. Topics included will pertain to muscular strength and endurance conditioning, physiology of strength conditioning, muscular strength testing and evaluation, and organization/ administration of strength training programs.
HSS 321. Essential/Personal Training. 3 Hours
Essential/Personal Training.

HSS 325. Women in Sport. 3 Hours
This course studies concepts about women, sport, and society from both a contemporary and historical perspective in an effort to understand the role of women in sport. Additionally, this course will help students understand the evolution and future of women in sport in both the U.S. and internationally.

## HSS 330. Leadership in Sport. 3 Hours

As our society and industries adapt and reinvent themselves, especially in the sport (service) industry, there is a need for individuals within organizations to step up to the role of a leader, independent of their formal position. Therefore, the purpose of this course is for students to start (or continue) to develop their self-awareness, understanding, knowledge and practice of leadership.

## HSS 331. Sport Ethics. 3 Hours

This course is a study of the ethical decisions of sport and athletics, using case analysis and real world examples to assist future sport management professionals to develop a set of moral reasoning skills to self-evaluate, examine, and critically analyze ethical issues they will encounter in their professional careers.

## HSS 335. Introduction to Athletic Training. 3 Hours

Application of principles and methods involved in prevention, care, and treatment of athletic injuries. Prerequisite(s): HSS 305.

HSS 341. Extreme Sports. 3 Hours
No description available.
HSS 345. Medical Evaluation \& Terminology. 3 Hours
Medical terminology related to physiological processes.

## HSS 349. Financing Sport Operations. 3 Hours

The financial concepts and theories and their application in the professional intercollegiate, recreational and commercial sport industries. Topics include revenues and expenses of professional, intercollegiate, and private sport industries; issues affecting these revenues and expenses; fundraising at the intercollegiate level; ownership in sport; and public and private funding for non-profit sports programs.

## HSS 350. Business of Soccer. 3 Hours

Business of Soccer.

## HSS 353. Sports Media. 3 Hours

This is the study and the appraisal of the media and the role that it plays in contemporary sports. Attention is also given to preparation and evaluation of media sports presentations.

## HSS 354. Sport in the Global Community. 3 Hours

Analyze the growth and development of sport throughout the global community with an emphasis on the structure and organization of sport. Additionally the production of major sport events, such as the Olympics and World Cup Soccer Tournament, will be examined. Prerequisite(s): HSS 250.
HSS 356. Human Resources Management in Sport. 3 Hours
This course is an overview of leadership and human resouce management. The course examines the techniques, policies, processes, strategies, and practices used by health-related and sport companies and managers to effectively and efficiently utilize human resources. Prerequisite(s): HSS 255.

## HSS 357. Sports Marketing. 3 Hours

Course content is designed to give students an understanding of marketing principles applied to sport, sport events, and sport products. Marketing strategies including the sales, promotions, and advertising of sport will be emphasized.

## HSS 358. Sales \& Fundraising in Sport. 3 Hours

Examination and understanding of sales and fundraising techniques. Students will gain first-hand experience in developing new skills for the job market.

## HSS 360. Sport \& Bodies. 3 Hours

The purpose of this course is to critically examine the ways in which the human (athletic) body is altered/modified, displayed/portrayed, and valued in terms of gender, race, social class, and disability. This course will address the "nature" and the "nurture" of sports and bodies. The course will examine how bodies are constructed, not just by nature, but by society as well.

## HSS 401. Nutritional Biochemistry I. 3 Hours

Extension of the student's knowledge of the science of nutrition, stressing the metabolism of food constitutents and recent advances in the field of nutrition. Prerequisite(s): (BIO 403 or HSS 307); CHM 314; HSS 295.

HSS 402. Nutrition for the Aging Adult. 2 Hours
The study of the process of aging through adulthood. This will focus on the changes in nutritional needs during the aging process. Attention will be paid to the community resources available to help provide optimum nutrition to healthy people as they age.

## HSS 404. Coaching Internship. 1-3 Hours

Practical coaching experience working in local schools with interscholastic teams. Elective.
HSS 405. Tests \& Measurements in Sport Science. 3 Hours
Direct relationship of tests and measurements to the field of sport science.

## HSS 406. Nutrition for Mother \& Child. 2 Hours

Physiologic and biochemical principles and results of current research are used to build a foundation for exploration of nutrition from the stages of growth and development, to maturation, and aging. These serve as the basis for consideration of the social, economic, physiologic, and lifestyle factors that influence nutrition status, food choices, and specific life state concerns. Particular attention is paid to using the principles of nutrition in planning and implementing recommendations for dietary change. Prerequisite(s): HSS 295, HSS 307.

## HSS 408. Physiology of Exercise. 3 Hours

Detailed study of the effects of exercise on human functions, as a basis for the study of physical fitness, motor skills, and athletic training. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

## HSS 408L. Physiology of Exercise Laboratory. 1 Hour

Course to accompany HSS 408. Weekly two-hour laboratory stressing practical applications of exercise physiology. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

## HSS 409. Kinesiology. 3 Hours

Investigation and analysis of human motion based on anatomical, physiological, and mechanical principles. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

## HSS 409L. Kinesiology Laboratory. 1 Hour

Course to accompany HSS 409. Weekly two-hour laboratory stressing the practical application of kinesiology.

## HSS 422. Exercise for Special Populations. 3 Hours

Course designed to prepare prospective exercise specialists to adapt physical education and exercise so that all individuals can successfully participate in activity programs. A study of various disabilities and conditions in order to organize and administer a program which will meet individual needs.

HSS 428. Research in Physical Activity \& Health. 3 Hours An introduction to statistical analysis and research methodology. Emphasis will be on the use of these in determining health statistics, designing and evaluating health studies, accessing data banks; collection, analysis and interpretation of health statistics.
HSS 431. Nutrition for Exercise \& Sport Science. 3 Hours Investigation of current research in the nutritional assessment of the athlete. Topics include dietary needs, fluid replenishment, pre-game meals, and "fad" diets for the athlete. Pre-requisite(s): HSS 295.

## HSS 439. Professional Seminar in Dietetics. 2 Hours

This guided practicum and seminar will provide an opportunity for candidates to develop and apply their knowledge of typical and atypical development from conception to age 3 as they observe young children in an infant/toddler classroom setting. Theories and research based practices related to infant and toddler care and education will be discussed. Candidates will conduct naturalistic assessment, identify developmental milestones and related risk factors, and will plan and execute play-based strategies to support develoment. 45 contact hours of field experience is required,.
HSS 448. Safety \& the Law in Physical Education \& Sports. 3 Hours
Study of the legal aspects of physical education and athletics. Analysis of specific court cases. Formulation of safety policies.

## HSS 455. Selected Studies in Exercise Science. 1-3 Hours

Investigating, analyz-ing, and reporting on a problem in physical education. Prerequisite(s): Permission of department chairperson.

## HSS 456. Nutritional Biochemistry II. 3 Hours

Integration and application of principles of physiology, nutrition and biochemistry to the processes of metabolic function.

## HSS 465. Physical Therapy Seminar. 3 Hours

Addresses current issues facing prospective and present physical therapists in a reforming healthcare industry.

## HSS 485. Sport Management Internship. 3 Hours

Work experience carried out under the auspices and supervision of the sports management staff. Application and permission of director of Sports Management program required.

## HSS 490. Exercise Science Internship - On Campus. 2 Hours

Work experience carried out under the auspices and supervision of the University of Dayton Wellness Program staff. Application and permission of director of Exercise Science and Fitness Management program required.

## HSS 491. Exercise Science Internship. 1-3 Hours

Work experience carried out under the auspices of an industrial, commercial, educational, government or health agency-related wellness program. Application and permission of director of Exercise Science and Fitness Management program required.

## HSS 495. Medical Nutrition Therapy I. 3 Hours

Study nutrition care process, nutritional diagnostic therapy and counseling services for the purpose of disease management to include: weight management, eating disorders, upper \& lower gastrointestinal disorders, hepatobiliary and pancreatic disorders, and nutrition support. Pre-requisite(s): CHM313, HSS345, Senior Standing. Co-requisite(s): HSS401,PSY431.

## HSS 496. Medical Nutrition Therapy II. 3 Hours

Study of nutrition care process, nutritional diagnostic therapy and counseling services for the purpose of disease management to include: Diabetes, Thyroid, Anemia, Cardiovascular, Pulmonary, Renal, Cancer, HIV, Metabolic Stress, Rheumatic, Neurologic, and Psychiatric Conditions. Pre-requisite (s) CHM 313, HSS 345, HSS 495, Senior standing. Co-requisite (s) HSS 456, PSY 431.

## HSS 498. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.

## HSS 499. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.

## Teacher Education

Majors:

- Bachelor of Science in Education and Health Sciences, Adolescence to Young Adult (p. 329)
- Bachelor of Science in Education (p. 330) and Health Sciences (p. 329), Early Childhood Education (p. 330)
- Bachelor of Science in Education (p. 332) and Health Sciences (p. 329), Early Childhood Leadership and Advocacy (p. 332)
- Bachelor of Science in Education (p. 332) and Health Sciences (p. 329), Foreign Language Education (p. 332)
- Bachelor of Science in Education (p. 333) and Health Sciences (p. 329), Intervention Specialist (p. 333)
- Bachelor of Science in Education (p. 334) and Health Sciences (p. 329), Middle Childhood Education (p. 334)
- Bachelor of Science in Education (p. 335) and Health Sciences (p. 329), Secondary Catholic Religion Education (p. 335)


## Endorsements:

- Early Childhood Generalist (p. 336)
- Pre-Kindergarten Special Needs (p. 336)
- Middle Childhood Generalist (p. 337)

Certificates:

- Early Intervention (p. 336)
- Early Childhood Leadership and Advocacy (p. 337)
- Teaching English to Speakers of Other Languages (p. 337)

The University of Dayton's Department of Teacher Education has adopted a theme that is integrated throughout the program of study and is consistent with the school-wide conceptual framework. The theme of "Teacher as Reflective Decision Maker in a Pluralistic Society" is appropriate because of the complex needs of students from diverse backgrounds. The department adopted this theme in accordance with the University's Marianist mission which encourages students to take an active role in improving the larger community, and also reflects the unit outcomes for the SEHS which include:

- Embracing diversity
- Building community
- Engaging in critical reflection
- Developing as scholarly practitioner

The Department has established a selection and retention policy that requires students to demonstrate throughout their program of study a 2.5 grade-point average overall, in professional education courses, and in teaching fields; ability to pass all three sections of Praxis I, and competency in objectives in field-based experiences. Furthermore, all students must complete at the University of Dayton a BCII and FBI criminal background background check. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file: a completed Good Moral Character form, copies of FBI and BCII fingerprint clearance certificates, and passing scores on the state of Ohio licensure tests.

Teacher Education Undergraduate Academic policies

1. Candidates for undergraduate licensure are placed in schools in the Miami Valley area for all clinical experiences. Student teaching is the capstone clinical experience for the preparation programs. Once students have been approved and placed for student teaching, they may not withdraw from the program except with the approval of the department chairperson. A student who withdraws without this approval forfeits future placement in student teaching.
2. An education course taken as an independent study cannot be applied toward teacher licensure.
3. Independent study is not available for regularly scheduled undergraduate courses.
4. Candidates must meet each of the following benchmarks:

- Cumulative grade point average must be \# 2.5
- Grade point average in each teaching concentration must be \# 2.5 prior to entry into the clinical experience (methods)
- Grade point average in professional education courses must be \# 2.5 after completing EDT 110 and the program specific development course, and maintained at \# 2.5 thereafter
- PRAXIS I: Must pass/be exempt all sections
- Grade of C- or higher in all EDT courses
- Grade of $S$ in all EDT labs prior to entry into clinical experience
- Unexcused absences in a Teacher Education course cannot exceed $13 \%$ in any given course


## Faculty

Connie L. Bowman, Chairperson
Professors Emeriti: Anderson, Frye, Fuchs, Geiger, Joseph, Rowley, Sudzina, Weaver
Professors: Hart, Kinnucan-Welsch, Lasley, Talbert-Johnson, Watras Associate Professors: Adams, Baldwin, Biddle, Bowman, Collopy, Herrelko, Hunn, Kelly, Richards, White
Assistant Professors: Bogard, Coovert
Clinical Faculty: Arnold, Engelhardt, Gallagher, Mathes, Nenonene, Sableski, Scheuermann

## Bachelor of Science in Education and health sciences with a major in Adolescence to Young Adult Education (EYA) minimum of 124 credit hours

The Department of Teacher Education offers a Bachelor of Science in Education and Health Sciences Degree in Adolescence to Young

Adult Education. The program meets all requirements for a state of Ohio license to teach learners ages twelve through twenty-one and grades seven through twelve.

A student in the Adolescence to Young Adult Education program is required to have a single comprehensive teaching field. The number of semester hours to complete the teaching field requirements is dependent upon the chosen teaching field and the concentration within the teaching field. PRAXIS I is required, or waived based on SAT/ACT scores, by the end of the first year. A student must maintain a 2.5 grade point average, in their professional education courses, in their content area, and overall, in order to continue in the program, to student teach, and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions must be approved by faculty adviser. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file: a completed Good Moral Character form, copies of FBI and BCII fingerprint clearance certificates, and passing scores on the state of Ohio licensure tests.

Adolescence to young adult education teaching fields include the following:

- Integrated Language Arts
- Integrated Mathematics
- Integrated Science
- Integrated Social Studies
- Earth Sciences/Chemistry
- Earth Sciences/Physics
- Earth Sciences
- Life Sciences/Chemistry
- Life Sciences/Earth
- Life Sciences/Physics
- Life Sciences
- Physical Sciences/Chemistry
- Physical Sciences/Physics
- Physical Sciences/Physics \& Chemistry


## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variable credit |

Faith Traditions

| Practical Ethical Action |  |
| :---: | :---: |
| Inquiry |  |
| Integrative |  |
| Advanced Study | variable credit |
| Philosophy and/or Religious Studies |  |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |
| 3 Completed with ENG 200H or ASI 120. |  |

## Major Requirements

| EDT 109 | Personal Aspects of Teaching ${ }^{1}$ | 1 |
| :---: | :---: | :---: |
| EDT 110 <br> \& 110L | The Profession of Teaching and The Profession of Teaching Laboratory ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { EDT } 222 \\ & \& 222 L \end{aligned}$ | Development in MC and AYA and Development in MC and AYA Laboratory ${ }^{1}$ | 3 |
| EDT 305 | Philosophy \& History of American Education (Satisfies CAP Practical Ethical Action and Adv Study PHL) | 3 |
| $\begin{aligned} & \text { EDT } 338 \\ & \text { \& 338L } \end{aligned}$ | Teaching \& Learning and Teaching \& Learning Laboratory | 3 |
| $\begin{aligned} & \text { EDT } 340 \\ & \& 340 L \end{aligned}$ | Educating Diverse Student Populations in Inclusive Settings and Educating Diverse Student Populations in Inclusive Settings Laboratory (Satisfies CAP Integrative and Diversity and Social Justice) | 3 |
| EDT 459 | Critical Reading \& Writing in the Content Area ${ }^{2}$ | 3 |
| EDT 436 | AYA Capstone Course (Satisfies CAP Capstone) | 3 |
| EDT 475 | Student Teaching-Adolescent to Young Adult ${ }^{3}$ | 12 |

EDT Special methods in teaching field ${ }^{1,3} 4$
EDT Special methods lab 1
MTH 114 Contemporary Math (Satisfies CAP Mathematics) ${ }^{4} \quad 3$
Concentration (10 courses) 30
Concentration/elective (6 courses) 18
1 Field experiences are arranged by the University. Must register for lab.
2 EDT 459 and special methods in teaching field must be taken concurrently.
3 Students will have a required seminar throughout the semester.
4 Only applicable to Language Arts and Social Studies majors.

## Bachelor of Science in Education and Health sciences with a major in Early Childhood Education (ece) minimum of 124 credit hours

program meets all requirements for a state of Ohio license to teach prekindergarten through grade 3.

A student in the Early Childhood Education program is required to choose an area of focus for elective coursework which must bring the total number of credit hours to 124 required for graduation. PRAXIS I is required, or waived based on SAT/ACT scores, by the end of the first year. A student must maintain a 2.5 grade point average, in their professional education courses and overall, in order to continue in the program, to student teach, and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file: a completed Good Moral Character form, copies of FBI and BCII fingerprint clearance certificates, and passing scores on the state of Ohio licensure tests.

## Common Academic Program (CAP)

$\begin{array}{ll}\text { *credit hours will vary depending on courses selected } & \\ \text { First-Year Humanities Commons }{ }^{1} & 12\end{array}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |


| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |
| :--- | :---: |
| ENG $200 \quad$ Writing Seminar II |  |
| Oral Communication |  |


| CMM $100 \quad$ Principles of Oral Communication | 3 |
| ---: | ---: |

Social Science 3
Arts 3
Natural Sciences 7

Crossing Boundaries variable credit
Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable |
| :--- | :--- |
| credit |  |


| Philosophy and/or Religious Studies |  |
| :--- | ---: |
| Historical Studies |  |
| Diversity and Social Justice | 3 |
| Major Capstone | $0-3$ |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

| Major Requirements | 1 |  |
| :--- | :--- | ---: |
| EDT 109 | Personal Aspects of Teaching | 3 |
| EDT 110 | The Profession of Teaching |  |
| \& 110L | and The Profession of Teaching Laboratory | 4 |
| EDT 211 | Child Development: Birth to Age 8 <br> \& 211L | and Child Development: Birth to Age 8 Laboratory |


| $\begin{aligned} & \text { EDT } 212 \\ & \& 212 L \end{aligned}$ | Early Childhood Theory \& Practice and Early Childhood Theory \& Practice Laboratory 1 | 3 |
| :---: | :---: | :---: |
| EDT 305 | Philosophy \& History of American Education (Satisfies CAP Practical Ethical Action and Adv Study in PHL) | 3 |
| $\begin{aligned} & \text { EDT } 313 \\ & \& 313 L \end{aligned}$ | Developmentally Appropriate Practice for Preschool Laboratory and Developmentally Appropriate Practice for Preschool Laboratory ${ }^{2}$ | 4 |
| EDT 317 | Integrating the Arts in Early Childhood Curriculum 2 | 2 |
| $\begin{aligned} & \text { EDT } 340 \\ & \& 340 L \end{aligned}$ | Educating Diverse Student Populations in Inclusive Settings and Educating Diverse Student Populations in Inclusive Settings Laboratory (Satisfies CAP Integrative and Diversity and Social Justice) ${ }^{3}$ | 3 |
| EDT 341 | Language Development \& Emmergent Literacy | 3 |
| EDT 350 | Foundations of Literacy Through Literature | 3 |
| EDT 412 | Developmentally Appropriate Practice in Math for ECE ${ }^{2}$ | 3 |
| EDT 413 | Developmentally Appropriate Practice in Social Studies for ECE ${ }^{2}$ | 2 |
| EDT 414 | Developmentally Appropriate Practice in Science for ECE ${ }^{2}$ | 3 |
| EDT 415 <br> \& 415L | Working with Young Learners with Mild To Moderate Disabilities and ECE Primary (K-3) Field Internship ${ }^{2}$ | 4 |
| EDT 450 | Phonics, Spelling \& Vocabulary | 3 |
| EDT 453 | Introduction to Literacy for Early Childhood ${ }^{2}$ | 3 |
| EDT 454 | Methods of Literacy for Early Childhood ${ }^{2}$ | 3 |
| EDT 472 | Internship in Pre-Kindergarten Special Needs ${ }^{4}$ | 5 |
| EDT 473 | Student Teaching-Primary Grades (Satisfies CAP Capstone) ${ }^{5}$ | 3-12 |
| GEO 204 | Geology for Teachers (Satisfies CAP Natural Sciences) | 4 |
| HST 251 | American History to 1865 (Satisfies CAP Adv in HST) | 3 |
| MUS 232 | Integrating the Arts (Satisfies CAP Arts) | 2 |
| $\begin{aligned} & \text { SCI } 190 \\ & \& 190 \mathrm{~L} \end{aligned}$ | The Physical Universe and The Physical Universe Laboratory (Satisfies CAP Natural Sciences) | 4 |
| SCI 230 | Organisms, Evolution \& Environment | 3 |
| VAE 101 | Early Childhood Art Education | 2 |
| Focus area | ves (0-4 courses) | Variable credit |

1 Field experiences arranged at the Bombeck Family Learning Center.
2 Designates cohort courses to be taken together in the same semester.
3 Field experiences are arranged by the University. Must register for lab.
4 Course should only be taken by students pursuing PKSN focus area or EIS license.

5 Students pursuing PKSN focus area or EIS license should take course for 10 semester hours; all other students should take course for 12 semester hours.

## Bachelor of Science in Education and health sciences with a major in Early Childhood Leadership and Advocacy (ecl) minimum of 121 credit hours

The Department of Teacher Education offers a Bachelor of Science in Education degree in Early Childhood Leadership and Advocacy. This programs provides knowledge and skills required of program administrators, supervisors, teacher leaders, and advocates for effective leadership and advocacy in a variety of early childhood settings.Students will be admitted after earning an Associate's Degree or equivalent in ECE or related field. Student must complete at least 54 hours from a fouryear institution, 30 semester hours of which must be completed at the University of Dayton, for a minimum of 121 credit hours.

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humanities Commons ${ }^{1}$ |  | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 | variab credit

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice
Major Capstone
0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Major Requirements

EDT 305
Philosophy \& History of American Education credit

EDT 340 \& 340L

EDT 460E \& 460EL

EDT 461E \& 461EL

EDT 462E \& 462EL

EDT 463E \& 463EL

EDT 464E
EDT 465E

Workshop

Educating Diverse Student Populations in Inclusive Settings
and Educating Diverse Student Populations in Inclusive Settings Laboratory
Collaboration with Families, Professional \& Agencies

Early Childhood Program \& Personnel
Management
and Early Childhood Program and Personnel Management Laboratory
Supporting Quality Curriculum \& Instruction in
Early Care \& Education and Supporting Quality Curriculum \& Instruction in Early Care \& Education Laboratory

Regulations, Licensing \& the Law in Early Care \& 3-4 Education
and Regulations, Licensing \& the Law in Early Care \& Education Laboratory
Managing Finances \& Marketing in Early Care \& Education and Managing Finances \& Marketing in Early Care \& Education Laboratory
Advocacy in Early Care \& Education
Internship \& Practicum in Early Childhood 6
Administration

## Bachelor of Science in Education and <br> health sciences with a major in Foreign Language Education (ELA) minimum of 124 credit hours

The Department of Teacher Education offers a Bachelor of Science in Education and Health Sciences Degree in Foreign Language Education.
The program meets all requirements for a state of Ohio license to teach P Education and Health Sciences Degree in Foreign Language Education.
The program meets all requirements for a state of Ohio license to teach P - 12. Three teaching concentrations are available: French, German, and Spanish.

PRAXIS I is required, or waived based on SAT/ACT scores, by the end of the first year. A student must maintain a 2.5 grade point average, in their professional education courses, in their content area, and overall in order to continue in the program, to student teach, and to be recommended for licensure. In addition, all field and clinical experiences must be variable successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions must be approved by faculty adviser. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file: a completed Good Moral Character form, copies of FBI and BCII fingerprint clearance certificates, and passing scores on the state of Ohio licensure texts, including the Oral Proficiency Interview (OPI) and Ohio licensure texts, including the Oral Proficiency Interview (OPI) and
the Writing Proficiency Test (WPT) offered by the American Council on the Teaching of Foreign Languages (ACTFL).

## Common Academic Program (CAP) <br> *credit hours will vary depending on courses selected

First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |



| Advance |  | variable credit | HST 251 | American History to 1865 (Either satisfies CAP Adv Study in HST) | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Philosophy and/or Religious Studies |  |  | or HST 252 | American History Since 1865 |  |
| Historical Studies |  |  | MTH 204 | Mathematical Concepts I | 3 |
| Diversity and Social Justice |  | 3 | MTH 205 | Mathematical Concepts II (Satisfies CAP | 3 |
| Major Capstone |  | 0-3 |  | Mathematics) |  |
| 1 Completed with ASI 110 and ASI 120. |  |  | $\begin{aligned} & \text { SCI } 190 \\ & \& 190 \mathrm{~L} \end{aligned}$ | and The Physical Universe Laboratory (Satisfies |  |
| 2 Or EN | and ENG 100B, or ENG 200 H , by placement. |  |  | CAP Natural Sciences) ${ }^{4}$ |  |
| Completed with ENG 200H or ASI 120. |  |  | $\begin{aligned} & \text { SCI } 230 \\ & \& 230 \mathrm{~L} \end{aligned}$ | Organisms, Evolution \& Environment and Organisms, Evolution \& Environment Laboratory (Satisfies CAP Inquiry) ${ }^{4}$ |  |
| Major Requirements |  |  |  |  |
| EDT 109 | Personal Aspects of Teaching ${ }^{1}$ | 1 |  |  |  |  | 1 Field experiences are arranged by the University. Must register for |
| $\begin{aligned} & \text { EDT } 110 \\ & \& 110 \mathrm{~L} \end{aligned}$ | The Profession of Teaching and The Profession of Teaching Laboratory ${ }^{2}$ | 3 | lab. <br> 2 Lecture and lab must be taken concurrently. EDT 443 \& 444 must be |  |  |
| $\begin{aligned} & \text { EDT } 207 \\ & \& 207 \mathrm{~L} \end{aligned}$ | Child \& Adolescent in Education and Child \& Adolescent in Education Laboratory ${ }^{2}$ | 4 | taken concurrently. Field experience is required. <br> Designates cohort courses to be taken together in the same |  |  |
| EDT 305 | Philosophy \& History of American Education (Satisfies CAP Practical Ethical Action and Adv Study in PHL) | 3 | semester. <br> 4 Students should take a lab with either SCI 190, or SCI 230. |  |  |
| EDT 340 | Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) | 3 | Bachelor of Science in Education and health sciences with a major in Middle |  |  |
| $\begin{aligned} & \text { EDT } 321 \\ & \& 321 \mathrm{~L} \end{aligned}$ | Classroom Environment for Middle Childhood and Classroom Environment for Middle Childhood Laboratory ${ }^{2,3}$ | 4 | 124 credit hours |  |  |
| EDT 341 | Language Development \& Emmergent Literacy | 3 | Education program, which leads to the Bachelor of Science in Education and Health Sciences Degree. The program meets all requirements for a state of Ohio license to teach grades four through nine in concentration areas. A student in the Middle Childhood Education Program is required to have two concentrations of 24 or more semester hours in the following content areas: |  |  |
| EDT 342 | Behavior Management | 3 |  |  |  |  |  |
| $\begin{aligned} & \text { EDT } 343 \\ & \& 343 L \end{aligned}$ | Introduction to Education of Learners with Mild/ Moderate Learning Needs and Introduction to Education of Learners with Mild/Moderate Learning Needs Laboratory ${ }^{2}$ | 3 |  |  |  |  |  |
| EDT 344 | Collaboration with Families, Professional \& Agencies | 3 | - Mathematics <br> - Science |  |  |
| EDT 350 | Foundations of Literacy Through Literature | 3 | - Social Studies |  |  |
| EDT 425 | The Middle School Principles \& Practices | 3 | - Reading/Language Arts |  |  |
| $\begin{aligned} & \text { EDT } 441 \\ & \& 441 \mathrm{~L} \end{aligned}$ | Adapting Content Standards for Students with Special Needs and Adapting Content Standards for Students with Special Needs Laboratory | 3 | PRAXIS I is required, or waived based on SAT/ACT scores, by the end of the first year. A student must maintain a 2.5 grade point average, in their professional education courses, in their content area, and overall, in order |  |  |
| $\begin{aligned} & \text { EDT } 442 \\ & \& 442 L \end{aligned}$ | Assessment: Mild/Moderate and Intervention Specialist: Mild/Moderate Field Internship ${ }^{2}$ | 4 | to continue in the program, to student teach, and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions |  |  |
| EDT 443 | Curriculum: Mild/Moderate ${ }^{2}$ | 2 |  | by faculty adviser. In order for the University of D |  |
| EDT 444 | Instructional Strategies: Mild/Moderate ${ }^{2}$ | 3 | to approve th | te of Ohio teaching license application, applicant |  |
| EDT 445 | Application of Computers/Technology in Special Education | 2 | BCII fingerpr Ohio licensur | earance certificates, and passing scores on the s ts. |  |
| EDT 450 | Phonics, Spelling \& Vocabulary | 3 |  |  |  |
| EDT 453 | Introduction to Literacy for Early Childhood | 3 | Common Ac | mic Program (CAP) |  |
| EDT 454 | Methods of Literacy for Early Childhood | 3 | *credit hours | vary depending on courses selected |  |
| EDT 476 | Student Teaching- Intervention Specialist: Mild/ Moderate (Satisfies CAP Capstone) | 12 | First-Year Humanities Commons ${ }^{1}$ |  | 12 |
|  |  |  | HST 103 | The West \& the World |  |
| GEO 204 | Geology for Teachers (Satisfies CAP Natural Sciences) | 4 | REL 103 | Introduction to Religioius \& Theological Studies |  |
|  |  |  | PHL 103 | Introduction to Philosophy |  |


| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| :---: | :---: | :---: |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variab |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variab credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |  |
| 3 Completed with ENG 200H or ASI 120. |  |  |
| Major Requirements |  |  |
| $\begin{aligned} & \text { EDT } 109 \\ & \text { (p. 329) } \end{aligned}$ | Persnl Aspcts-Tchng | 1 |
| $\begin{aligned} & \text { EDT } 110 \\ & \text { (p. 329) } \\ & \text { \& } 110 \mathrm{~L}(\text { p. 329) } \end{aligned}$ | Profession-Teachng and Prfssn Tchng Lab ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { EDT } 222 \\ & \text { (p. 329) } \\ & \text { \& 222L (p. 329) } \end{aligned}$ | Devipmnt-MC \& AYA and Dvplmt MC \& AYA lab ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { EDT } 305 \\ & \text { (p. 329) } \end{aligned}$ | Phil\&Hist of Amer Ed (Satisfies CAP Practical Ethical Action and Adv Study PHL) | 3 |
| $\begin{aligned} & \text { EDT } 321 \\ & \text { (p. 329) } \\ & \text { \& 321L (p. 329) } \end{aligned}$ | CIrm Env Mid Chdhd and Clsrm Envmnt MC Lab ${ }^{1,2}$ | 4 |
| $\begin{aligned} & \text { EDT } 340 \\ & \text { (p. 329) } \\ & \text { \& } 340 \mathrm{~L}(\mathrm{p.} 329) \end{aligned}$ | Educating Diverse Student Populations in Inclusive Settings and Ed Dvs st Pop Inc Lb (Satisfies CAP Integrative and Diversity and Social Justice) ${ }^{1,2}$ | 3 |
| $\begin{aligned} & \text { EDT } 350 \\ & \text { (p. 329) } \end{aligned}$ | Found Literacy Thr Lit | 3 |
| $\begin{aligned} & \text { EDT } 423 \\ & \text { (p. 329) } \end{aligned}$ | MC Capstone Seminar | 2 |
| $\begin{aligned} & \text { EDT } 425 \\ & \text { (p. 329) } \\ & \text { \& 425L (p. 329) } \end{aligned}$ | Md Schl Prin\&Prac and Mid Chld Prin\&Prac Lb | 3 |
| $\begin{aligned} & \text { EDT } 450 \\ & \text { (p. 329) } \end{aligned}$ | Phonics,Spell, Voc | 3 |
| $\begin{aligned} & \text { EDT } 452 \\ & \text { (p. 329) } \end{aligned}$ | Digital Literacies, ELL and Content Reading Strategies | 3 |


| EDT 458 <br> (p. 329) <br> \& 458L (p. 329) | Reading, Writing, and Assessment - MC and MCE MI Fld Intnshp ${ }^{1,2}$ | 4 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { EDT } 474 \\ & \text { (p. 329) } \end{aligned}$ | Std Tch Mid Chldhd ((Satisfies CAP Capstone)) | 12 |
| Methods course | (select two): | 6 |
| $\begin{aligned} & \text { EDT } 426 \\ & \text { (p. 329) } \end{aligned}$ | Rdg/Lng Arts-MC |  |
| $\begin{aligned} & \text { EDT } 427 \\ & \text { (p. 329) } \end{aligned}$ | Math-Middle Childhd |  |
| $\begin{aligned} & \text { EDT } 428 \\ & \text { (p. 329) } \end{aligned}$ | Sci-Middle Childhd |  |
| $\begin{aligned} & \text { EDT } 429 \\ & \text { (p. 329) } \end{aligned}$ | Soc Std-Middle Chld |  |
| Concentration (12 | courses) ${ }^{3}$ | 36 |
| Total Hours |  | 89 |
| 1 Field experiences are arranged by the University. Must register for Lab. |  |  |
| 2 Designates cohort courses to be taken together in the same semester. |  |  |
| 3 Fewer concentration hours may be required depending upon chosen concentrations. |  |  |
| Bachelor of Science in Education |  |  |
| and health sciences with a major in |  |  |
| Secondary Catholic Religion Education |  |  |
| (ERL) minimum of $\mathbf{1 2 4}$ credit hours |  |  |

The Department of Teacher Education offers the Bachelor of Science in Education and Health Sciences degree in Secondary Catholic Religion Education. This program leads to the Archdiocese of Cincinnati Certificate to teach religion grades 7-12.

PRAXIS I, is required or waived, by the end of the first year. A student must maintain a 2.5 grade point average, in their professional education courses and overall, in order to continue in the program, to student teach, and to be recommended for the certificate. In addition, all field and clinical experiences must be successfully completed. Students should take electives as needed to achieve 124 semester credit hours.

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1} 12$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I $^{2}$ |

Second-Year Writing Seminar ${ }^{3} \quad 0-3$ ENG 200 Writing Seminar II
Oral Communication 3
CMM 100 Principles of Oral Communication
Mathematics 3
Social Science 3
Arts 3
Natural Sciences 7


| EDT 472 <br> (p. 329) | PKSE Internship | 5 |
| :--- | :--- | ---: |
| Total Hours |  | 17 |

## Early Childhood Leadership and Advocacy Certificate

The Department of Teacher Education offers the Early Childhood Leadership and Advocacy Certificate program. This certificate provides knowledge and skills required of program administrators, supervisors, teacher leaders, and advocates for effective leadership and advocacy in a variety of early childhood settings. Students enrolled in an Early Childhood License program may complete the coursework for the Early Childhood Leadership and Advocacy Certificate as a focus area for their undergraduate degree.
$\left.\begin{array}{llc}\text { Early Childhood Leadership and Advocacy Certificate } \\ \text { EDT 460E } \\ \text { (p. 329) } \\ \text { \& 460EL } \\ \text { (p. 329) }\end{array} \quad \begin{array}{llc}\text { ErlyChldPrgmPersnIMng } \\ \text { and ErlyDhdPrgmPrsnIMngLb }\end{array}\right)$

## Middle Childhood Generalist Endorsement

The Department of Teacher Education offers the Middle Childhood Generalist Endorsement program. This endorsement can be added to any existing Middle Childhood License for any combination of the four areas of concentration. The generalist endorsement will allow teachers to teach grades 4-6 only. In order for the University of Dayton to approve the state of Ohio endorsement application, candidates must have on file in the SEHS Dean's Office passing scores on the state of Ohio licensure tests.

| Middle Childhood Generalist Endorsement |  |  |
| :--- | :--- | ---: |
| Language and Reading |  |  |
| EDT 426 Rdg/Lng Arts-MC <br> (p. 329)  <br> Select one course from  <br> EDT 608 The Writing Classrm <br> (p. 329)  <br> ENG 470 History of English <br> (p. 329)  <br> ENG 472 Structure of English <br> (p. 329)  |  |  |


| $\begin{aligned} & \text { LNG } 468 \\ & \text { (p. 329) } \end{aligned}$ | Intro Linguistics |  |
| :---: | :---: | :---: |
| Mathematics |  |  |
| $\begin{aligned} & \text { EDT } 427 \\ & \text { (p. } 329 \text { ) } \end{aligned}$ | Math-Middle Childhd | 3 |
| $\begin{aligned} & \text { MTH } 266 \\ & \text { (p. 329) } \end{aligned}$ | Disc\&Fin Mth in MS | 3 |
| Science (Prerequisites: SCI 190, SCI 190L, SCI 210, \& SCI 210L)) |  |  |
| $\begin{aligned} & \text { EDT } 428 \\ & \text { (p. 329) } \end{aligned}$ | Sci-Middle Childhd | 3 |
|  |  | 4 |
| $\begin{aligned} & \text { SCI } 230 \\ & \text { (p. 329) } \\ & \text { \& 230L (p. 329) } \end{aligned}$ | Org,Evol,Envrmnt and Org,Evl,Envirn Lab | 4 |
| Social Studies |  |  |
| $\begin{aligned} & \text { EDT } 429 \\ & \text { (p. 329) } \end{aligned}$ | Soc Std-Middle Chld | 3 |
| $\begin{aligned} & \text { HST } 251 \\ & \text { (p. 329) } \end{aligned}$ | Amer Hst to 1865 | 3 |

## Teaching English to speakers of other languages certificate (TESOL)

The Department of Teacher Education offers the Undergraduate Certificate in Teaching English to Speakers of Other Languages program. This program is an interdisciplinary program, drawing from courses in the Departments of Teacher Education, English, and Global Languages and Cultures. The program is designed for current University of Dayton students enrolled in any major. It prepares students to teach English as an additional language in post-secondary schools, adult education settings, and private language institutes in the United States and abroad. It can also provide opportunities for preservice teacher education students to develop competence in working with English Language Learners in their grade-level and content-area classrooms. It should be noted that the certificate alone does not meet the requirements for the TESOL endorsement from the state of Ohio; however, the certificate coursework will apply toward the TESOL Endorsement program, which is offered at the post-baccalaureate level.

## TESOL Certificate

| $\begin{aligned} & \text { LNG } 468 \\ & \text { (p. 329) } \end{aligned}$ | Intro Linguistics | 3 |
| :---: | :---: | :---: |
| or ENG 468 <br> (p. 329) | Intro to Linguistics |  |
| $\begin{aligned} & \text { ENG } 472 \\ & \text { (p. 329) } \end{aligned}$ | Structure of English | 3 |
| $\begin{aligned} & \text { EDT } 437 \\ & \text { (p. 329) } \end{aligned}$ | Second Language Learning and Teaching | 3 |
| $\begin{aligned} & \text { ENG } 466 \\ & \text { (p. 329) } \end{aligned}$ | TESOL Methods for Teaching English Language Learners | 3 |
| $\begin{aligned} & \text { EDT } 438 \\ & \text { (p. 329) } \end{aligned}$ | TESOL Practicum | 1 |
| Total Hours |  | 13 |

## Courses

## EDT 109. Personal Aspects of Teaching. 1 Hour

This course is a candidate's general introduction to education as a profession, and to the University of Dayton. Candidates' personal values, goals, motives and strengths will be identified and reflected upon in relation to the qualities and dispositions necessary to be an effective teacher. This course serves as an introduction to the different program areas (AYA, MCE, ECE, IS and multi-age), to technology in education and to various educational issues. EDT 109 is waived for those candidates who transfer to the University.

## EDT 110. The Profession of Teaching. 2 Hours

This course is designed to study the principal components of effective teaching that facilitate the learning of all students. Current educational issues, the Ohio Standards for the Teaching Profession and other professional standards, developing a community of learners, service learning and teaching incorporating the Marianist traditions are other topics of the course. Field experience: 20 hours. Prerequisite(s): EDT 109 or permission of dean's undergraduate coordinator. Corequisite(s): EDT 110L.

## EDT 110L. The Profession of Teaching Laboratory. 1 Hour

 This lab consists of planned field experiences providing candidates the opportunity for field reflections in school settings. Corequisite(s): EDT 110.
## EDT 207. Child \& Adolescent in Education. 3 Hours

Study of the empirical principles of intellectual, moral, physical, personality, and social development as related to performance in the classroom. Interpretations for appropriate generic teaching behaviors and developmental causes of behavior problems are discussed. Field experience required. Prerequisite(s): EDT 110. Corequisite(s): EDT 207L.

## EDT 207L. Child \& Adolescent in Education Laboratory. 1 Hour

 This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to child and adolescent development in school settings. Corequisite(s): EDT 207.
## EDT 211. Child Development: Birth to Age 8. 3 Hours

This course focuses on the study of typical physical, motor, socialemotional, and aesthetic development of young children ages preconception through eight. Assessment, risk factors, environmental design and guiding behavior are covered. Students will use this knowledge to reflect on and make decisions about practices that serve the needs of young children and their families. This course relies on field experience to be completed at the Bombeck Family Learning Center. Prerequisite(s): EDT 110. Corequisite(s): EDT 211L.
EDT 211L. Child Development: Birth to Age 8 Laboratory. 1 Hour This 45 contact hour practicum course is one semester of a year long field experience held in conjunction with EDT 211and EDT 212. Only students who have been accepted to the Early Childhood Program are eligible. During registration, students should sign up for a weekly time slot at the Bombeck Family Learning Center. Current medical forms with a negative TB test, background check, and references are required. Forms are available at the Bombeck Family Learning Center website. Corequisite(s): EDT 211.

EDT 212. Early Childhood Theory \& Practice. 3 Hours
This course is an introduction to the theory base that drives developmentally appropriate practice for working with young children birth through age eight. It extends knowledge of how children develop and focuses on theories of Piaget, Kohlberg, Skinner, Pavlov, Erikson, Rogers, and Vygotsky. Students will learn to write lesson plans using a Praxis based lesson plan format. Field experience required at the Bombeck Family Learning Center. Prerequisite(s): EDT 110. Corequisite(s): EDT 212L.

EDT 212L. Early Childhood Theory \& Practice Laboratory. 0 Hours This practicum course is a year long field experience held in conjunction with EDT 211 and EDT 212. Only students who have been accepted to the Early Childhood Program are eligible. During registration, students should sign-up for a weekly time slot at the Bombeck Family Learning Center. Current medical forms with a negative TB test, background check, and references are required. Forms are available at the Bombeck Family Learning Center website. Corequisite(s): EDT 212.

## EDT 222. Development in MC and AYA. 3 Hours

This course is the study of the physical, social, emotional, intellectual and moral characteristics of the developmental period of early adolescence to young adulthood, within the context of human growth and development. The course focuses on changes in the family setting, social and community contexts, threats to health and safety, and typical risk behaviors. Field experience required. Prerequisite(s): EDT 110. Corequisite(s): EDT 222L.

## EDT 222L. Development in MC and AYA Laboratory. 0 Hours

This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to young adolescent and young adult development in school settings. Corequisite(s): EDT 222.

## EDT 303. School, Self \& Society. 3 Hours

This course is a study of the relationships among institutional reform, personality development, and social change in rural, urban, and suburban schools to examine the influence of the cultures of communities on their schools. The responses of local schools to national policies will also be included in the course.

## EDT 305. Philosophy \& History of American Education. 3 Hours

 This course is the study of American philosophy of education in a historical framework. This course emphasizes the political analyses of educational issues in their historical context. Thematic issues from the Catholic/Marianist perspective are included among the topics studied. Prerequisite(s): EDT 110; PHL 103.
## EDT 306. History of Catholic K-12 Schools in the United States. 3 Hours

This course examines the Catholic K- 12 educational experience in the United States with a particular emphasis on the impact that Catholic schools have had on the creation of Catholic culture in America and on American culture in general. Particular emphasis is placed upon those historical antecedents that directly or indirectly affect Catholic schools today. Prerequisite(s): EDT 110, HST 103, PHL 103.

## EDT 312. Infant \& Toddler Practicum Seminar. 2 Hours

This guided practicum and seminar will provide an opportunity for candidates to develop and apply their knowledge of typical and atypical development from conception to age 3 as they observe young children in both structured and naturalistic settings. Developmental milestones as well as related risk factors will be emphasized.

## EDT 313. Developmentally Appropriate Practice for Preschool Laboratory. 3 Hours

This course will expand the knowledge of how young children, ages three through five, learn and develop. How to provide opportunities that will support this age group's physical, social, emotional, language, cognitive and aesthetic development will be explored. Extensive focus on the content areas of art, music, science, social studies and math as well as guiding behavior and family culture will occur. Field experience in an urban preschool or preschool special education setting required. Prerequisite(s): EDT 110, 212. Corequisite(s): EDT 313L, 340, 340L, 453.

EDT 313L. Developmentally Appropriate Practice for Preschool Laboratory. 1 Hour
This field experience provides students with an opportunity to work with diverse populations. Placements are made in preschool programs that serve children from low income families, minority children who are at risk, or children with identified special needs. Corequisite(s): EDT 313.
EDT 314. Collaborative Assessment \& Team Models. 3 Hours This course provides an in depth study of transdisciplinary teaming and collaborative assessment models in the field of early childhood special education. Included will be the transdisciplinary and collaborative nature of assessment in the diagnosis, screening, and instruction of young children (birth to age eight) who are typically and atypically developing. Emphasis will be given to the role of the family in the assessment process. Systematic observation using a play-based approach will be emphasized. Prerequisite(s): EDT 110, EDT 212.
EDT 315. Health \& Medical Issues for Early Childhood. 3 Hours Study of the health and medical needs associated with young children with disabilities. Students engage in collaboration between educational and medical professionals in an effort to integrate services for young children.

## EDT 317. Integrating the Arts in Early Childhood Curriculum. 2 Hours

This course will provide opportunities for early childhood majors to integrate the arts throughout the early childhood curriculum in meaningful ways. Music, dance, drama and visual arts will be used to represent what young children know and are able to do as well as provide an opportunity to recognize and appreciate cultural difference in artistic expression. Candidates will create aesthetically pleasing newsletters and websites to communicate with families and to market their program.
EDT 318. Urban Teacher Academy-Junior Seminar. 0-1 Hours This course is designed to deepen understanding of critical issues facing urban educators. Students will examine how the culture of poverty affects students, families, and schools. Instructional and management strategies that encourage the learning and development of efficacy, risktaking, socio-cultural awareness, contextual interpersonal skills, and selfunderstanding are developed through integrated readings, discussions, field experience, and presentations. Inherent in this deepening of understanding is the development of reflective thinking and writing and problem solving strategies.
EDT 321. Classroom Environment for Middle Childhood. 3 Hours
This course is the study of the middle childhood student within the classroom environment. Theories of learning and practical applications, motivation, classroom management and discipline, lesson and unit planning, teaching methodologies and assessment are examined and practiced. Field experience required. Prerequisite(s): EDT 110, EDT 222. Corequisite(s): EDT 321L.

## EDT 321L. Classroom Environment for Middle Childhood Laboratory. 1 Hour

This lab consists of planned field experiences providing candidates the opportunity for field reflections in regards to learning theories and classroom management in middle level school settings. Corequisite(s): EDT 321.

EDT 322. Perspectives on Education \& Social Justice. 3 Hours Students will explore various research paradigms representing the different disciplines in relation to current educational issues from a social justice perspective. The educational issues will be critically explored from diverse perspectives or domains, and the skills learned will be transferable to the multiple disciplines. The primary student learning outcome (SLO) for the course will be: practical wisdom, as the students will address real problems/issues in P-12 education, drawing upon the knowledge, values, and skills embedded within their specific discipline.

## EDT 323. Historical Literacy \& Historical Thinking. 3 Hours

Exploration of the cognitive processes that constitute historical thinking and historical understanding with an emphasis on the development of historical literacy in the students themselves and strategies designed to increase historical literacy in secondary school students.

## EDT 331L. Religion Methods Laboratory. 0-1 Hours

No description available.

## EDT 336. The Culture of the Catholic School. 3 Hours

This course explores the theological, moral, academic, human, and social components that give the Catholic school its distinctive culture. The role of spiritual, saramental, and communal relationships in the creation of Catholic school identity will be examined. Prerequisite(s): EDT 110.

## EDT 338. Teaching \& Learning. 3 Hours

This course is a study of the empirical principles of learning such as reinforcement, discovery, motivation and transfer theories. Interpretations for generic teaching behaviors especially in diagnosis, prescription and assessment are presented. Field experience required. Prerequisite(s): EDT 207 or EDT 222. Corequisite(s): EDT 338L.

## EDT 338L. Teaching \& Learning Laboratory. 0 Hours

This lab consists of planned field experiences providing candidates the opportunity for field reflections in regard to learning theories in school settings. Corequisite(s): EDT 338.

## EDT 340. Educating Diverse Student Populations in Inclusive Settings. 3 Hours

This course is the study of the characteristics, legal aspects, and educational needs of students with challenges in learning. The role of the general educator in making curricular modifications and accommodations, adapting instruction and collaborating with other educators to facilitate learning in the general classroom for these students is examined. Field experience required. Prerequisite(s): EDT 110. Corequisite(s): EDT 340L.

## EDT 340L. Educating Diverse Student Populations in Inclusive Settings Laboratory. 0 Hours

This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to adapting learning experiences for diverse learners in school settings. Corequisite(s): EDT 340.

EDT 341. Language Development \& Emmergent Literacy. 3 Hours
This course is the study of oral language and literacy development in children, with implications for all learners, including children with special needs. Prerequisite(s): EDT 110.

## EDT 342. Behavior Management. 3 Hours

This course examines the principles and methods of observing, recording, measuring and managing human behavior with emphasis on students with disabilities. Prerequisite(s): EDT 340 (may be taken as a corequisite).

## EDT 343. Introduction to Education of Learners with Mild/Moderate Learning Needs. 3 Hours

This course is a study of the role and function of the intervention specialist. This course presents issues of definition, identification and placement procedures. The candidate will acquire knowledge of major researchers and historians, variations in belief, traditions and values across cultures, and current practices in the field. Field experience required. Prerequisite(s): ECE: EDT 340. Corequisite(s): EDT 343L.
EDT 343L. Introduction to Education of Learners with Mild/Moderate Learning Needs Laboratory. 0 Hours
This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to the individual learning needs of students in school settings. Corequisite(s): EDT 343.

## EDT 344. Collaboration with Families, Professional \& Agencies. 3

 HoursThis course examines theories and techniques to assist teachers in working with colleagues, families and agency personnel to provide an appropriate educational program, improve home-school relationships and develop family-professional partnerships. Historical and legal perspectives of parental influence on special education service are examined. Prerequisite(s): IS: EDT 343; ECE: EDT 340.
EDT 350. Foundations of Literacy Through Literature. 3 Hours
This course serves as an introductory course to the reading/language arts (listening, speaking, reading, writing, viewing, visual representation) and the role literature plays in these processes. It is a foundation course in reading and is intended to align with the requirements of Ohio Reading Core licensure standards for the Early Childhood, Middle Childhood, and Intervention Specialist programs. Topics examined include the foundations of literacy, research, theories, and related models of reading, various children's and young adult literature, the integration of technology in literacy, an overview of the importance of on-going assessment in teaching reading/language arts, and an awareness of cultural, linguistic, and ethnic diversity in individual learners. Prerequisite(s): EDT 110.

## EDT 400. Independent Study. 1-12 Hours

This course is an in-depth study of a selected educational topic. The candidate develops an individual learning plan that includes objectives, schedule of readings and assignments, products and methods of assessment. Prerequisite(s): Permission of department chairperson.

## EDT 404. Current Innovations in Education. 3 Hours

This course is the study of current innovations in education. The course focuses on the examination and critical analysis of recent trends in curriculum and instructional and assessment strategies in P -12 schools.

EDT 406. Special Topics in Teaching. 1-3 Hours
This course is the study of specialized areas of education not typically included in the professional education sequence. Topics are announced.
EDT 409. Mathematics for 4th \& 5th Grades. 3 Hours
Planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques for teaching mathematics to students in grades 4 and 5 with varied needs and abilities using a tier method. Topics include: Ohio Academic Content Standards, applications and instructional techniques that address proficiency testing, resources, technologies, manipulatives, interdisciplinary connections, grouping techniques, current research, and 21st Century Skills.

## EDT 410. Science for 4th \& 5th Grades. 3 Hours

Planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques for teaching science to students in grades 4 and 5 with varied needs and abilities using a tier method. Topics include: Ohio Academic Content Standards, applications and instructional techniques that address proficiency testing, resources, technologies, manipulatives, interdisciplinary connections, grouping techniques, current research, and 21st Century Skills.

## EDT 411. Social Studies for 4th \& 5th Grades. 3 Hours

Course designed to address social studies content including social aspects of learning, and pedagogy specific to 4th/5th grades.

## EDT 412. Developmentally Appropriate Practice in Math for ECE. 3 Hours

This course will extend the candidate's knowledge of how children, six through eight years, develop and learn in order to provide opportunities that support the physical, social, emotional, language, cognitive, and aesthetic development of all young children. Students will learn to use knowledge of how young children, ages six through eight, differ in their development and approaches to learning mathematics in order to provide individually appropriate opportunities for learning the subject. The course will emphasize teaching in the content of mathematics and will focus on the Ohio Mathematics academic content standards and the NCTM standards. Field experience is integrated with the primary block. This course is part of the first semester senior year internship and culminates in the second semester of student teaching. Prerequisite(s):
EDT 110, EDT 212, EDT 313; successful completion of field experience. Corequisite(s): EDT 413, EDT 414, EDT 415, EDT 415L, EDT 454.

## EDT 413. Developmentally Appropriate Practice in Social Studies for ECE. 2 Hours

Students will learn to use knowledge of how young children ages six through eight differ in their development and approaches to learning Social Studies in order to provide individually appropriate opportunities for learning the subject. The course will emphasize teaching in the content of Social Studies and will focus on the Ohio Social Studies academic content standards and the NCSS standards. Field experience is integrated with the primary block. This course is part of the first semester senior year internship and culminates in second semester student teaching. Prerequisite(s): EDT 110, EDT 212, EDT 313; successful completion of field experience. Corequisite(s): EDT 412, EDT 414, EDT 415, EDT 415L, EDT 454.
EDT 414. Developmentally Appropriate Practice in Science for ECE. 3 Hours
This course will explore resources and techniques available to provide all early childhood students with a holistic, interdisciplinary understanding of science. Candidates will design lessons, activities, and assessments which link the national standards, state model, and international goals to contemporary events and children's daily lives. Developmentally appropriate practices, science processes, inquiry, problem-solving, and safety issues will be addressed. Prerequisite(s): EDT 110, EDT 212, EDT 313; GEO 204; SCI 190, SCI 190L, SCI 230, SCI 230L; successful completion of field experience. Corequisite(s): EDT 412, EDT 413, EDT 415, EDT 415L, EDT 454.

## EDT 415. Working with Young Learners with Mild To Moderate Disabilities. 3 Hours

This course is the study of the role and function of the early childhood educator in working with learners with mild to moderate disabilities. The course presents issues of definition, identification and placement procedures. The candidate will acquire knowledge of major researchers and historians, variations in belief, traditions and values across cultures, and current practices in the field. Field experience required as part of the K-3 block. Prerequisite(s): EDT 212, EDT 340; successful completion of field experience. Corequisite(s): EDT 412, EDT 413, EDT 414, EDT 415L, EDT 454.
EDT 415L. ECE Primary (K-3) Field Internship. 1-2 Hours
This ECE field experience is the first semester of the senior level internship, which provides the candidate the opportunity for practice and reflection in K-3 settings. Corequisite(s): EDT 412, EDT 413, EDT 414, EDT 415, EDT 454.
EDT 418. Urban Teacher Academy- Senior Seminar. 0-1 Hours This course is designed to deepen understanding of critical issues facing urban educators. Students will examine how the culture of poverty affects students, families, and schools. Instructional and management strategies that encourage the learning and development of efficacy, risktaking, socio-cultural awareness, contextual interpersonal skills, and selfunderstanding are developed through integrated readings, discussions, field experience, and presentations. Inherent in this deepening of understanding is the development of reflective thinking and writing and problem solving strategies.
EDT 419. Kindergarten-Primary Curriculum \& Instruction. 3 Hours This course focuses on planning, assessment, instructional methods, materials, and evaluation techniques for teaching children in kindergarten and primary grades. Integrated curriculum and the Ohio Early Learning/ Academic Content Standards in math and science will be emphasized. Prerequisite(s): EDT 110, EDT 211, EDT 212. Corequisite(s): EDT 419L.

## EDT 419L. Kindergarten-Primary Curriculum \& Instruction Laboratory. 0 Hours

This 20 contact hour lab in a kindergarten or primary grades classroom supports the material covered in EDT 419. Corequisite(s): EDT 419.

## EDT 423. MC Capstone Seminar. 2 Hours

No description available.

## EDT 425. The Middle School Principles \& Practices. 3 Hours

This course is primarily a study of organization (school structure), philosophy and curriculum of middle level education (9-14 year olds), grades 4-9. It is designed to present the theoretical knowledge base about middle level (school) education. Issues and concerns, current trends and the essential elements relating to middle level education will be discussed throughout the semester of study. A variety of inquiry methods will be modeled that encourage critical thinking skills. Prerequisite(s): EDT 222, EDT 321.

## EDT 425L. Middle Childhood Principles \& Practices Laoratory. 0 Hours

This lab consists of planned field experiences providing candidates the opportunity for field reflections in regards to the study of organization (school structure), philosophy and curriculum of middle level education ( $9-14$ year olds), grades $4-9$. It is designed to support the course study of the theoretical knowledge base about middle level (school) education. Issues and concerns, current trends and the essential elements relating to middle level education will be observed and studied throughout the semester. Corequisite(s): EDT 425.

## EDT 426. Reading/Language Arts for Middle Childhood. 3 Hours

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching reading/ language arts to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades 4-9, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 321, EDT 425. Corequisite(s): EDT 458, EDT 458L; two content methods courses.

## EDT 427. Math for Middle Childhood. 3 Hours

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching mathematics to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades 4-9, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, manipulatives, and other visuals, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 321, EDT 425. Corequisite(s): EDT 458, EDT 458L; two content methods courses.

## EDT 428. Science for Middle Childhood. 3 Hours

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching science to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades 4-9, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, experiments, and other hands-on experiences, interdisciplinary connections, various grouping techniques, and current research. Prerequisite(s): EDT 321, EDT 425. Corequisite(s): EDT 458, EDT 458L; two content methods courses.

## EDT 429. Social Studies for Middle Childhood. 3 Hours

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching social studies to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades 4-9, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies and active hands-on experiences, other visuals, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 321, EDT 425. Corequisite(s): EDT 458, EDT 458L; two content methods courses.

## EDT 431. Integrated Language Arts Methods for Adolescent to Young Adult. 3 Hours

This course focuses on planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques for teaching all levels of integrated language arts to students in grades 7-12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades 7-12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, interdisciplinary connections, various grouping techniques, best practices, and current research. Field experience required. Prerequisite(s): EDT 222, EDT 222L, EDT 338, EDT 338L. Corequisite(s): EDT 305, EDT 431, EDT 459.

EDT 431L. Integrated Language Arts Methods AYA (7-12) Field Internship. 1-2 Hours
This AYA field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in the integrated language arts, AYA setting. Corequisite(s): EDT 305, EDT 431, EDT 459.

## EDT 432. Math Methods for Adolescent to Young Adult. 3 Hours

This course focuses on planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques for teaching all levels of mathematics to students in grades 7-12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades 7-12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, manipulatives, and other visuals, interdisciplinary connections, various grouping techniques, best practices, and current research. Field experience required. Prerequisite(s): EDT 222, EDT 222L, EDT 338, EDT 338L. Corequisite(s): EDT 305, EDT 432L, EDT 459.
EDT 432L. Math Methods AYA (7-12) Field Internship. 1-2 Hours This AYA field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in a math, AYA setting. Corequisite(s): EDT 305, EDT 432, EDT 459.

## EDT 433. Foreign Language Methods for Adolescent to Young Adult. 3 Hours

This course focuses on planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques for teaching all levels of foreign language to students in grades 7-12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades 7-12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities and other visuals, interdisciplinary connections, various grouping techniques, best practices, and current research. Field experience required. Prerequisite(s): EDT 207, EDT 207L, EDT 338, EDT 338L. Corequisite(s): EDT 305, EDT 433L, EDT 459.

## EDT 433L. Foreign Language Methods for AYA (7-12) Field Internship. 1-2 Hours

This AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a foreign language, AYA setting. Corequisite(s): EDT 305, EDT 433, EDT 459.

EDT 434. Science Methods for Adolescent to Young Adult. 3 Hours This course focuses on planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques for teaching all levels of science to students in grades 7-12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades 7-12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities, interdisciplinary connections, various grouping techniques, best practices, and current research. Field experience required. Prerequisite(s): EDT 222, EDT 222L, EDT 338, EDT 338L. Corequisite(s): EDT 305, EDT 434L, EDT 459.
EDT 434L. Science Methods for AYA (7-12) Field Internship. 1-2 Hours
This AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a science, AYA setting. Corequisite(s): EDT 305, EDT 459.

## EDT 435. Integrated Social Studies Methods for Adolescent to Young Adult. 3 Hours

This course focuses on planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques for teaching all levels of integrated social studies to students in grades 7-12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades 7-12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities, interdisciplinary connections, various grouping techniques, best practices, and current research. Field experience required. Prerequisite(s): EDT 222, EDT 222L, EDT 338, EDT 338L. Corequisite(s): EDT 305, EDT 435L, EDT 459.

## EDT 435L. Integrated Social Studies Methods for AYA (7-12) Field Internship. 1-2 Hours

This AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a social studies, AYA setting. Corequisite(s): EDT 305, EDT 435, EDT 459.

## EDT 436. AYA Capstone Course. 3 Hours

This course will serve as a culminating course to the AYA Senior Block experience. It will provide content for topics that former students deemed important as well as educational research techniques. The course was designed by AYA faculty to meet the missing components that our work with NCATE spa requirements demands from our individual content areas. Specifically, the course will cover action research, educational research, content area research, data collection analysis and management, real classroom issues, and the integration of all these elements to measure and improve student achievement. Corequisite(s): EDT 475.

## EDT 437. Second Language Learning \& Teaching. 3 Hours

This course provides opportunities to explore the nature of language proficiency, second language acquisition, second language literacy, bilingualism and biliteracy, the role of culture in language learning, and implications for second language teaching.

## EDT 438. TSEOL Practicum. 1 Hour

This course provides opportunities to practice planning, instruction and assessment in an ESOL classroom under the mentorship of an experienced ESOL teacher. Pre-requisite (s): EDT 437, LNG 468, ENG 472, ENG (TESOL Methods).

## EDT 441. Adapting Content Standards for Students with Special Needs. 3 Hours

This course focuses on the planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques used by intervention specialists in inclusive and more restrictive settings to address K-12 content area standards. The topics emphasized include an understanding of how to align Ohio's academic content standards with applications and instructional techniques that ensure the achievement of special education students in the general education curriculum. The course examines the role of the intervention specialist in collaboration with general educators in making appropriate accommodations and modifications.

## EDT 441L. Adapting Content Standards for Students with Special

 Needs Laboratory. 0 HoursThis lab focuses on the planning, diagnosis, instructional methods, materials, assessment, and evaluation techniques used by intervention specialists in inclusive and more restrictive settings to address K-12 content area standards. I.S. students will work with licensed educators to develop an understanding of how to align Ohio's academic content standards with applications and instructional techniques that ensure the achievement of special education students in the general education curriculum. The lab emphasizes the role of the intervention specialist in collaboration with general educators in making appropriate accommodations and modifications.

## EDT 442. Assessment: Mild/Moderate. 3 Hours

This course is the study of the multidisciplinary use of assessment instruments and techniques in the diagnosis, planning and evaluation of the special needs learner and the development of individual education programs. Prerequisite(s): EDT 321, EDT 340, EDT 343, EDT 425. Corequisite(s): EDT 442L, EDT 443, EDT 444.
EDT 442L. Intervention Specialist: Mild/Moderate Field Internship. 1-2 Hours
This Intervention Specialist: Mild/Moderate field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in mild/moderate intervention specialist settings. Corequisite(s): EDT 442, EDT 443, EDT 444.

## EDT 443. Curriculum: Mild/Moderate. 2 Hours

This course is the study of curriculum development considering the motor, cognitive, academic, social, language, affective, functional, life skills, and individual programming of students with mild/moderate disabilities. Field experience required. Prerequisite(s): EDT 321, EDT 340, EDT 343, EDT 425. Corequisite(s): EDT 344, EDT 442, EDT 442L, EDT 444.

## EDT 444. Instructional Strategies: Mild/Moderate. 3 Hours

This course examines the strategies, materials, and evaluation techniques for teaching students with mild/moderate learning problems. Field experience required. Prerequisite(s): EDT 321, EDT 340, EDT 343, EDT 425. Corequisite(s): EDT 442, EDT 442L, EDT 443.

## EDT 445. Application of Computers/Technology in Special Education. 2 Hours

This course is the study of basic computer applications in special education, including instructional programs, software evaluation, telecommunications, multimedia and hypermedia, assistive technology, augmentative devices, resources, and legal/ethical issues. Prerequisite(s): EDT 341, EDT 343.

## EDT 446. Career Education/Special Education. 2 Hours

Theory and techniques of job classification, assessment, selection, placement, and activities related to work from pre-school to adult. Prerequisite(s): EDT 343. Corequisite(s): EDT 442, EDT 442L, EDT 443, EDT 444.

EDT 447. Instructional Strategies: Moderate. 2 Hours
This course examines strategies for teaching and managing behaviors of students with moderate disabilities. Prerequisite(s): EDT 321, EDT 340, EDT 343, EDT 425 Corequisite(s): EDT 442, EDT 442L, EDT 443, EDT 444.

## EDT 450. Phonics, Spelling \& Vocabulary. 3 Hours

This course provides the background knowledge necessary for effectively teaching and assessing the role of phonics in the reading process. Emphasis is on developing phonemic awareness, phonics, spelling, and word recognition/word meaning embedded in the context of a total reading/language arts program focused on meaning construction. Prerequisite(s): EDT 350. Corequisite(s): EDT 453 or EDT 458.
EDT 452. Digital Literacies, ELL \& Content Reading Strategies. 3 Hours
In this course, Middle Childhood candidates examine the strategies and techniques in the development of prior knowledge skills, study skills, vocabulary, technology, and assessment as they relate to critical reading abilities in a variety of curriculum areas. Prerequisite(s): EDT 350.
EDT 453. Introduction to Literacy for Early Childhood. 3 Hours
Study of appropriate instruction and assessment supporting the literacy development of children PK - grade 3. Major emphasis is on developing the knowledge base related to a comprehensive framework for literacy instruction, including reading, writing, and content area literacy, with a focus on instruction supporting emerging and early readers and writers. Prerequisite(s): EDT 350.

## EDT 454. Methods of Literacy for Early Childhood. 3 Hours

The continued study of appropriate instruction and assessment supporting the literacy development of children PK - grade 3, with a focus on instruction supporting developing and transitional readers and writers. Major emphasis is on the classroom application of the principles of comprehensive literacy instruction and assessment, including the writing process and comprehension strategies across the content areas. Prerequisite(s): EDT 350, EDT 453.

## EDT 458. Reading Methods \& Assessment - MC. 3 Hours

An integrated language arts course focusing on the knowledge base underpinning the teaching of reading and related language arts processes within the language arts and across the curriculum to students of various ages, needs, and abilities. Topics include planning, instructional methods, materials, assessment, and evaluation techniques. Field experience required. Prerequisite(s): EDT 350. Corequisite(s): EDT 458L; two content methods courses.

## EDT 458L. MCE Middle Level (4-9) Field Internship. 1-2 Hours

This MCE field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in middle level school settings. Corequisite(s): EDT 458; two content methods courses.
EDT 459. Critical Reading \& Writing in the Content Area. 3 Hours This class focuses on the teaching of reading and writing in the AYA and multi-age content area that includes instruction in organizing instruction, use of protocols for oral language development, strategies for word skill development, strategies for reading comprehension, and assessment strategies for instructional purposes for the multi-age and adolescence to young adult licenses. Prerequisite(s): EDT 110, EDT 222, EDT 338, EDT 338L. Corequisite(s): EDT 305; two content methods courses.

## EDT 460E. Early Childhood Program \& Personnel Management. 3

 HoursThis course is the first in the Early Childhood Leadership program. Students will explore program and personnel management and human relations in early care and education. Corequisite(s): EDT 460EL.

## EDT 460EL. Early Childhood Program and Personnel Management

 Laboratory. 0-1 HoursThis lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to program and personnel management and human relations in early care and education. Corequisite(s): EDT 460E.

## EDT 461E. Supporting Quality Curriculum \& Instruction in Early Care

 \& Education. 3 HoursThis course provides opportunities for students to use research to identify and support quality early childhood curriculum, instruction, and assessment. Corequisite(s): EDT 461EL.

## EDT 461EL. Supporting Quality Curriculum \& Instruction in Early Care \& Education Laboratory. 0-1 Hours

This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to using research to identify and support quality early childhood curriculum, instruction, and assessment. Corequisite(s): EDT 461E.

## EDT 462E. Regulations, Licensing \& the Law in Early Care \& Education. 3 Hours

This course addresses ethics in early care and education as well as issues related to health, safety, and nutrition regulations including first aid, communicable disease, safety policies, and practices. Reporting and recognizing child abuse is addressed. Students will learn to respond to regulations, licensing, and laws that impact programs for young children. Corequisite(s): EDT 462EL.

## EDT 462EL. Regulations, Licensing \& the Law in Early Care \& Education Laboratory. 0-1 Hours

This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to regulations, licensing and laws that impact programs for young children. Corequisite(s): EDT 462E.

## EDT 463E. Managing Finances \& Marketing in Early Care \& Education. 3 Hours

Students will explore strategies for managing finances and developing marketing plans in the field of early care and education. Prerequisite(s): EDT 460E.

## EDT 463EL. Managing Finances \& Marketing in Early Care \&

 Education Laboratory. 0-1 HoursThis lab supports students in EDT 463E as they explore managing finances and developing marketing plans in the field of early care and education.
EDT 464E. Advocacy in Early Care \& Education. 3 Hours
This courses explores current political, educational, and societal issues related to early care and education and examines how teachers develop leadership skills to become better advocates for children, families, and the profession. Prerequisite(s): EDT 460E.

## EDT 465E. Internship \& Practicum in Early Childhood Administration. 6 Hours

This internship serves as the culminating experience where students demonstrate the knowledge, skills, and disposition addressed in the four proceeding early childhood leadership courses. Students complete a six week full time internship working with/as a early childhood director or administrator. Prerequisite(s): EDT 460E.

EDT 471. Student Teaching- Foreign Languages K-12. 12 Hours Full-time supervised and evaluated teaching of foreign languages in $\mathrm{P}-12$ classes. The candidate will demonstrate the knowledge, skills, and dispositions required of a beginning foreign language teacher. Attendance at weekly seminars is required. Prerequisite(s): EDT 433; formal admission to student teaching a full semester in advance; completion of $80 \%$ of the content area courses.
EDT 472. Internship in Pre-Kindergarten Special Needs. 5 Hours Supervised and evaluated teaching in a preschool special education setting. Candidates are to demonstrate the knowledge, skills, attitudes, and dispositions needed to comply with the National Association for the Education of Young Children (NAEYC) and the Division for Early Childhood of the Council of Exceptional Children (DEC) guidelines for appropriate practice that are specific to pre-kindergarten age children with special needs. Field experience required. Prerequisite(s): EDT 314, EDT 315, EDT 415, EDT 415L; Students must register for the course and submit a student teaching/internship application packet to the Department of Teacher Education by the deadline in January prior to the fall methods block.

## EDT 473. Student Teaching-Primary Grades. 3-12 Hours

The student teaching experience is a full-time, evaluated experience in a primary setting. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning primary grade teacher. Prerequisite(s): Formal admission to student teaching a full semester in advance.
EDT 474. Student Teaching- Middle Childhood. 12 Hours
Full-time supervised and evaluated teaching in grades 4-9 in at least one of the two candidate's concentration subjects. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning middle-level teacher. Attendance at weekly seminars is required. Prerequisite(s): Two of following: EDT 426, EDT 427, EDT 428, EDT 429; formal admission to student teaching a full semester in advance.
EDT 475. Student Teaching-Adolescent to Young Adult. 12 Hours Full-time supervised and evaluated teaching in the content area in a junior or senior high school classroom. The candidate will demonstrate the knowledge, skills, and dispositions required of a beginning secondary teacher. Attendance at weekly seminars is required. Prerequisite(s): Formal admission to student teaching a full semester in advance; completion of $80 \%$ of the content area courses.

## EDT 476. Student Teaching- Intervention Specialist: Mild/Moderate.

 12 HoursFull-time supervised and evaluated teaching with students demonstrating $\mathrm{mild} /$ moderate learning needs. The candidate will demonstrate the knowledge, skills and dispositions of a beginning mild/moderate intervention specialist teacher. Attendance at seminars is required. Prerequisite(s): EDT 342, EDT 343, EDT 343L, EDT 344, EDT 442, EDT 442L, EDT 443, EDT 444, EDT 445; formal admission to student teaching a full semester in advance.

## EDT 477. Student Teaching- Art K-12. 12 Hours

Full-time supervised and evaluated teaching in art classes in schools (P-12). The candidate will demonstrate the knowledge, skills, and dispositions required of a beginning art teacher. Attendance at a weekly seminar is required. Prerequisite(s): VAE 231, VAE 383, VAE 483; formal admission to student teaching a full semester in advance and the methods courses.

EDT 479. Student Teaching- Music K-12. 12 Hours
Full-time supervised and evaluated teaching in music classes in schools (P-12). The candidate will demonstrate the knowledge, skills and dispositions required of a beginning music teacher. Attendance at a weekly seminar is required. Prerequisite(s): MUS 331, MUS 332, MUS 335; formal admission to student teaching a full semester in advance; piano proficiency and completion of junior/senior recital.
EDT 486. Comparative Study-Public Education. 3 Hours
This course is designed to study the background and development of education as compared to educational systems in other countries. The organizing themes are how social, political, and cultural foundations shape schools. Comparisons across countries and cultures will provide a context to understand how educational practices are shaped by culture.

## EDT 498. Honors Thesis. 3 Hours

This course is based on the selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to juniors in the University Honors or Berry Scholars Programs with permission of the program director and EDT chairperson. Prerequisite(s): Permission of department chairperson and program director.

## EDT 499. Honor Thesis. 3 Hours

This course is based on the selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to seniors in the University Honors or Berry Scholars Programs with permission of the program director and EDT chairperson.

# Undergraduate - School of Engineering 

Tony E. Saliba, Ph.D., Dean School of Engineering, Wilke Distinguished Professor
Riad Alakkad, Associate Dean for Undergraduates Studies
John Weber, Associate Dean for Graduate Studies

## Our Vision

The Vision of the School of Engineering is to become a preeminent engineering school providing transformational learning experiences that prepare engineering students for leadership, service, and success in life, profession, and society. It is our goal to be recognized for outstanding engineering research that positively advances the human condition, addresses critical needs of the world, and provides economic growth to our region, our nation, and our world. Finally, we are committed to being a nurturing, inclusive environment that promotes the development of all members of the School of Engineering family to their full potential while supporting and advancing the Catholic and Marianist mission of the University of Dayton.

## Our Mission

The Mission of the School of Engineering is to educate complete professionals who have an integrated knowledge of the theory and practice of engineering together with an equally strong understanding of the arts and sciences that will prepare them for fulfilling careers of leadership, service, and life-long learning for the good of society.

## Our Purpose

The School of Engineering has as its primary purpose the education of men and women toward a profound knowledge that engineering is more than a problem-solving discipline. While our curriculum and our research do not directly address issues of faith, we nonetheless affect in many ways the character and sensibilities of our students, not just as problem solvers but as individuals who respect the world that they shape for the good of others. Accordingly, our students receive an education that is rigorously directed toward advanced knowledge in engineering, while demonstrating at every turn the important relationships and interdependencies that exist between engineering and the rest of the disciplines across the full spectrum of human knowledge. We therefore educate students to be both intellectually astute and discerning in all their work and morally responsible in the face of the demands and rewards of our ever-changing world.

As an educational unit of a private university, the School of Engineering strongly emphasizes the advising of students so that they may achieve their educational objectives within the engineering program. First-year students are advised by an advising team. At the end of the second semester, each student is assigned a faculty advisor in his/her program. Academic advising begins before the students begin their formal course work and continues as they progress toward their objectives.

The broader responsibilities of the engineering profession demand that the professional education of an engineer include a significant component of humanities, ethics, and social science studies so that the student will become aware of the urgent problems of society and develop a deeper appreciation of the cultural achievements of humanity. Additionally, such studies provide the proper framework to ensure that scientific discoveries
and developments by engineers may result in the true advancement of the human race.

## Academic Programs

The engineering program in each of the fields of chemical (p. 351), civil (p.360), computer (p.368), electrical (p. 366), and mechanical engineering ( p .391 ) is designed to lead to a bachelor's degree in a four-year period. While students pursue curricula they themselves have chosen according to their fields of interest, they all take certain core courses in mathematics, chemistry, physics, English, and engineering fundamentals. All of the programs permit additional specialization (as an overload) in minors in areas such as aerospace engineering (p.393), bioengineering (p.355), chemical processing (p. 356), composite materials engineering (p. 356), computer systems (p. 369), engineering management (p. 374), engineering mechanics (p. 361), environmental engineering (p. 362), materials engineering (p. 357), mechanical systems (p. 393), operations engineering (p. 374), polymer materials (p. 357), signals and systems (p. 369), structures (p. 362), transportation engineering (p.362) and water resources engineering (p. 363) in the School of Engineering and in other areas such as languages, music, and political science in other units of the University. Concentrations in the School of Engineering include aerospace engineering (p. 392), electro-optics (p. 369), energy systems-chemical (p. 354), energy systems-mechanical (p. 392) and robotics (p. 369). Although emphasis is on fundamental theories, continued attention is paid to the solution of practical problems which the student will encounter in the practice of engineering.

The programs in chemical engineering, civil engineering, computer engineering, electrical engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

The programs in electronic \& computer, industrial, global manufacturing systems, and mechanical engineering technology are accredited by the Engineering Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

## Courses

## EGR 100. Enrichment Workshop. 0 Hours

A workshop structured to provide collaborative learning of engineering calculus facilitated with upper-class engineering students. Required course both semesters for first-year students.
EGR 102. Seminar for Undergrad Engineering Students. 0 Hours Introduction to engineering faculty, facilities, and curriculum; survey of career opportunities in engineering; orientation to the university. This course is part of the Integrated Engineering Core for all engineering students.

## EGR 103. Engineering Innovation. 2 Hours

First year multi-disciplinary innovation projects primarily geared towards skill development in the areas of requirements analysis, creativity, conceptual design, design and problem-solving processes, prototyping, teamwork, and project communications. Application to the development of a new product or technology meeting societal needs. This course is part of the Integrated Engineering Core for all engineering students.

## EGR 198. Multidisciplinary Research \& Innovation Laboratory. 1-6

 HoursStudents participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## EGR 200. Professional Development Seminar. 0 Hours

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

## EGR 201. Engineering Mechanics. 3 Hours

This course provides an introduction to mechanics as applied to engineering problems. Principles of force and moment balance, work, and energy conservation are applied to systems in static equilibrium. The similarity of balance laws applied to mechanical behavior to those used in thermodynamics and electric circuits is introduced. Students are introduced to the concepts of free-body diagrams and equivalent systems of forces, properties of areas and sections, analysis of simple structures, internal forces, stress, and material failure. Introduces a common problem-solving approach and processes to address and solve open ended problems and creative application of theory. Both analytical and computer solutions of engineering mechanics problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168; PHY 206.

## EGR 202. Engineering Thermodynamics. 3 Hours

This course provides an introduction to engineering thermodynamics, emphasizing the vital importance of energy generation and efficiency from a multi-disciplinary perspective. State descriptions of pure substances and mixtures. Control volume analysis and conservation principles applied to systems with respect to mass, energy, and entropy with applications to power, refrigeration, chemically reacting and other energy conversion systems. Introduces a common problem-solving approach and processes to address real, open ended problems and creative application of theory. Both analytical and computer solutions of engineering thermodynamics problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168.

## EGR 203. Electrical \& Electronic Circuits. 3 Hours

This course provides an introduction to the discipline of Electrical and Computer Engineering. Covers principles of linear circuit analysis and problem solving techniques associated with circuits containing both passive and active components. Students are introduced to DC circuit analysis, AC circuit analysis, and transient circuit analysis. Applications of basic electronic devices including diodes, transistors, and operational amplifiers are studied. Both analytical and computer solutions of electrical and electronic circuit problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168.

EGR 298. Multidisciplinary Research \& Innovation Laboratory. 1-6 Hours
Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

EGR 299. Innovation Design \& Entrepreneurship. 3 Hours No description available.

## EGR 311. Principles of Nanotechnology. 3 Hours

Nanoscale properties: optical, mechanical and thermal effects at the nanoscale, quantum confinement effects. Fabrication techniques: top downand bottom up techniques; nano-patterning, thin films. Nanometrology: scanning electron microscope, atomic force and microscope. Nanoelectronics: single electron devices, grapheme and carbon nanotube electronics. Carbon nanotubes, quantum dots, nanophotonics.

## EGR 320. Systems Design Scholars Seminar. 3 Hours

Interdisciplinary systems-design experience to emphasize the basic problem-solving approach and philosophy of engineering for students of varied backgrounds. By permission only.
EGR 323. Project Management. 3 Hours
No description available.
EGR 330. Engineering Design \& Appropriate Technology. 0-3 Hours An experiential course in appropriate technology and engineering design which spans the winter and summer semesters and includes language preparation, cultural immersion, selected readings, and discussions on appropriate technology and a six to sixteen week summer servicelearning experience focused on technical or engineering related work in a developing country. Prerequisite(s): Junior or senior status; permission of instructor.
EGR 398. Multidisciplinary Research \& Innovation Laboratory. 1-3 Hours
Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## EGR 411. Advanced Nanotechnology. 3 Hours

Nanotechnology in information, energy, fabrication and metrology: data storage, nanoelectronics, 3-D transistors; nanomaterials in photovoltaics, fuel cells; thin films, optical and non-optical lithography, MEMS, nanofabrication processes; scanning electron microscopy.

## EGR 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## EGR 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis.
Restricted to students in University Honors Program. Prerequisite(s): EGR 493.

## EGR 498. Honors Thesis. 3-6 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## EGR 499. Engineering Systems Design. 3 Hours

This course will provide students of varied backgrounds with an interdisciplinary systems-design experience of applying basic engineering problem-solving and process-oriented approaches to a set of case studies while examining those case studies through different philosophical perspectives on engineering itself.

## Engineering Technology

The School of Engineering also offers a Bachelor of Science in Engineering Technology. The programs in which the degree is offered are:

- Electronic and Computer Engineering Technology
- Global Manufacturing Systems Engineering Technology
- Industrial Engineering Technology
- Mechanical engineering Technology

Students in Engineering Technology programs participate in an integrated education core in which they study specialized technical courses that emphasize rational thinking and the application of engineering and scientific principles to the practical solution of technological problems. Extensive laboratory experience aids the students in the design, analysis, and implementation of systems, as well as experiencing real-world application problems. The multidisciplinary curriculum culminates in a capstone design project. All programs offer a cooperative education program in which the student is allowed to alternate work and study semesters after the first year. Additionally, many students acquire experience through internships, summer work, or study abroad.

Graduates are critical thinkers who can apply established scientific and engineering knowledge to implement systems,and are prepared to take places in society as responsible, humane, complete professionals. They work effectively on multidisciplinary design teams building complex systems. Graduates are usually involved in the design, performance evaluation, service, and sales of products, equipment, and manufacturing systems or the management of these activities. Several years after graduation, they may find themselves in management positions.

The University of Dayton engineering technology programs prepare graduates who:

- are competent and productive in the practice of both the technical and communication aspects of their profession;
- demonstrate ethical and professional standards of conduct
- exhibit leadership qualities as appropriate for the practice of their profession;
- are involved in service activities that benefit their profession and their community; and
- are engaged in continuing professional development.


## TRANSFER STUDENTS

The engineering technology programs welcome transfer students from associate degree programs in engineering technology who wish to pursue the Bachelor of Science in Engineering Technology. Graduates
of two-year associate degree programs in engineering technology should normally expect to undertake at least two additional years of work for the bachelor's degree.

## MINORS IN ENGINEERING TECHNOLOGY

Students majoring in any engineering technology program may earn a minor in another engineering technology program by completing 12 approved semester hours of work in the second discipline. Courses already required in the student's program may not be counted in the minor. The director of the program in which the minor is to be earned is responsible for approving the list of courses for the minor.

The minors available to engineering technology students are:

- Automotive Systems
- Electronic and Computer Engineering Technology
- Global Manufacturing Systems Engineering Technology
- Industrial Automation and Applied Robotic Systems
- Industrial Engineering Technology
- Integrated Arts \& Technology
- Mechanical Engineering Technology
- Quality Assurance
- Sustainable Manufacturing

A minor in Engineering Technology is also offered for students enrolled in majors in the College of Arts and Sciences, the School of Business Administration, and the School of Education and Health Sciences.

## ACCREDITATION

The programs in electronic \& computer, global manufacturing systems, industrial, and mechanical engineering technology are accredited by the Engineering Technology Accreditation Commission of ABET 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

## ENGINEERING TECHNOLOGY FIRSTYEAR REQUIREMENTS

Students selecting any of the four engineering technology majors should take the courses prescribed under the Sample Plan of Study. Undeclared engineering technology students should follow the first-year schedule below.

Total first-year requirements:

| CHM 123 | General Chemistry |  |
| :--- | :--- | :--- |
| \& 123L | and General Chemistry Laboratory | 4 |
| EGR 103 | Engineering Innovation | 2 |
| ENG 100 | Writing Seminar I | 6 |
| \& ENG 200 | and Writing Seminar II |  |
| or ENG 200H | Writing Seminar II | 3 |
| HST 103 | The West \& the World | 2 |
| MCT 110L | Technical Drawing \& CAD Laboratory | 8 |
| MTH 137 | Calculus I with Review |  |
| \& MTH 138 | and Calculus I with Review | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| REL 103 | Introduction to Religioius \& Theological Studies | 3 |
| SET 100 | Engineering Technology First Year Seminar | 0 |
| SET 101 | Enrichment Workshop | 0 |


| SET 153L | Technical Computation Laboratory | 1 |
| :--- | :--- | ---: |
| Total Hours | 32 |  |

## Total Hours

## Minors in Engineering

The student majoring in chemical, civil, computer, electrical, or mechanical engineering may choose a minor area of technical study. The minors program in the School of Engineering provides an opportunity to specialize in a particular technical sub-area while still pursuing a major program of study in one of the traditional and well recognized engineering disciplines. The minors program was designed in response to the needs of industry and government and to the educational needs and career objectives of students. Election of the minor is optional; it may require additional courses for completion.

The minor is defined as at least 12 semester hours of work. It can be composed of any number of 1 - to 4 -semester-hour courses selected from the approved list of minor areas of study.

The minors available to engineering students are:

- Aerospace Engineering (p. 390)
- Automotive Systems (p. 374)
- Bioengineering (p. 351)
- Chemical Processing (p. 351)
- Composite Materials Engineering (p. 351)
- Computer Systems (p. 365)
- Electrical and Computer Engineering Technology (p. 374)
- Energy Production Engineering (p. 351)
- Engineering Management (p. 374)
- Engineering Mechanics (p. 360)
- Engineering Technology (p. 374)
- Environmental Engineering (p. 360)
- Global Manufacturing Systems Engineering Technology (p. 374)
- Industrial Automation and Applied Robotic Systems (p. 374)
- Industrial Engineering Technology (p. 374)
- Integrated Arts and Technology (p. 374)
- Materials Engineering (p. 351)
- Mechanical Engineering Technology (p. 374)
- Mechanical Systems (p. 390)
- Operations Engineering (p. 374)
- Polymer Materials (p. 351)
- Quality Assurance (p. 374)
- Signals and Systems (p. 365)
- Structures (p. 360)
- Sustainable Manufacturing (p. 374)
- Transportation Engineering (p. 360)
- Water Resources Engineering (p. 360)

A 12 semester hour concentration in electro-optics is available to electrical and computer engineering undergraduates. A 16 semester hour concentration in aerospace engineering is also available to mechanical engineering students. Additional minors from outside the School of Engineering are available in many subject areas.
Students, in consultation with their faculty advisors, normally select the minor or concentration in the second semester of their sophomore year. The minor or concentration is designated on the student's transcript.

## Degree Requirements

A student enrolls in the curriculum prescribed for the academic year in which he or she is registered as a first-year student at the University of Dayton or elsewhere. If for any reason it is necessary or desirable to change to a subsequently established curriculum, the student must meet all of the requirements of the new curriculum.

The degrees Bachelor of Chemical, Civil, Electrical, or Mechanical Engineering, Bachelor of Science in Computer Engineering, and Bachelor of Science in Engineering Technology are conferred at commencement if the general requirements enumerated here (p. 43) have been fulfilled as well as those listed below:

1. All bachelor's degrees granted by the University of Dayton require a cumulative grade point average of at least 2.0.
2. The cumulative grade-point average in all courses which have an engineering prefix must be at least 2.0 ( C average).
3. All prescribed courses outlined in the respective curricula must have been passed with grades of $D$ or better. Although courses may be scheduled in terms other than as listed, all prerequisites and corequisites must be met.
4. All students in the School of Engineering must register under Grade Option 1 for all courses in engineering, mathematics, and science except those offered only under Grade Option 2.
5. The student must have taken their last 30 semester hours through the School of Engineering at the University of Dayton.

The semester hours of credit required for graduation in each engineering curriculum administered by the School of Engineering are as follows:

Bachelor of Chemical Engineering 137
Bachelor of Civil Engineering 138
Bachelor of Electrical Engineering 134
Bachelor of Mechanical Engineering 132
Bachelor of Science in Computer Engineering 137
The semester hours of credit required for graduation in each engineering technology curriculum administered by the School of Engineering are as follows:

Bachelor of Science in Engineering Technology
Electronic and Computer Engineering Technology Major 131
Global Manufacturing Systems Engineering Technology Major 133
Industrial Engineering Technology Major 131
Mechanical Engineering Technology Major 132

## Engineering First-Year Requirements

Students who are recent high school graduates or who have earned fewer than 15 semester hours of collegiate credit are classified as first-year students and must meet common engineering program requirements. Such credit requirements may be met in a number of ways, including:

1. Advanced college-level course work at the University of Dayton or other collegiate institutions,
2. Advanced placement examinations,
3. Departmental examinations during the first term, or
4. Taking the prescribed courses as part of the first year.

| Required First | ar Program | 31-35 |
| :---: | :---: | :---: |
| CHM 123 | General Chemistry | 3 |
| CMM 100 | Principles of Oral Communication | 3 |
| EGR 100 | Enrichment Workshop ${ }^{2}$ | 0 |
| EGR 103 | Engineering Innovation | 2 |
| ENG 100 <br> \& ENG 200 <br> or ENG 200 H | Writing Seminar I and Writing Seminar II Writing Seminar II | 3-6 |
| HST 103 | The West \& the World ${ }^{3}$ | 3 |
| MTH 168 \& MTH 169 | Analytic Geometry \& Calculus I and Analytic Geometry \& Calculus II | 8 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 206 | General Physics I-Mechanics ${ }^{4}$ | 3 |
| REL 103 | Introduction to Religioius \& Theological Studies | 3 |
| Basic Science Laboratory ${ }^{5}$ |  | 1 |
| First-Year Student Orientation |  | 0-1 |
| $\text { Programming }{ }^{6}$ |  | 0-4 |

1 Chemical engineering majors take CMM the first semester. Electrical, computer and mechanical engineering majors take this requirement the second semester. Civil engineering majors postpone this requirement.
2 Required both semesters.
3 Chemical engineering students must take CHM 124 and CHM 124L in the second semester and postpone one of the three Humanities Base courses until the third semester.
4 Chemical engineering students postpone this requirement until the second semester.
5 Chemical, civil, and mechanical engineering students must take CHM 123L; computer and electrical engineering students take PHY 210L.
6 Chemical, mechanical and civil engineering students are not required to take any programming course in the first year. Computer and electrical engineering students must take CPS 150 in the second semester. Mechanical engineering students take MEE 104L in the second semester of the first year.

## Transfer Students

The engineering programs welcome transfer students from both community and senior colleges and work closely with many schools to facilitate transfers from pre-engineering programs. Students may complete the first two years of study in other accredited institutions and transfer to the University of Dayton with little or no loss of credit provided that they have followed programs similar to those prescribed by the University of Dayton School of Engineering.

The School of Engineering has dual degree arrangements as well as curriculum agreements with Sinclair Community College and Edison Community College.

## Bachelor's Plus Master's Program

The School of Engineering offers a combined program leading to both a bachelor's degree in an engineering major and a master's degree.

Physics majors (College of Arts and Sciences) may also participate. The program is designed for the qualified student who wishes to pursue either greater specialization in a major area or to complement the undergraduate program with a related graduate-level concentration. Most students who select the program have received some advanced placement upon entry to engineering at the first-year level or take occasional summer courses.

The formal request for entrance into this program may be made as early as before the first semester of the student's junior year, but the student should consult their department to determine exactly when this request should be made. Admission requirements include a minimum cumulative grade point average of 3.00 and permission from the chairperson of the department corresponding to the student's undergraduate major and chair/program director of selected masster's program. Students must formally apply to the graduate school during their senior year. Selection of the graduate (master's) program area is indicated below:

## Undergraduate Program <br> Chemical Engineering

Civil Engineering

|  | Management Science, Materials |
| :--- | :--- |
|  | Engineering, Renewable and Clean |
|  | Energy |
| Computer Engineering | Bioengineering, Civil Engineering, |
|  | Electrical Engineering, Electro- |
|  | Optics*, Engineering Management, |
|  | Engineering Mechanics, |
|  | Management Science, Materials |
|  | Engineering, Renewable and Clean |
|  | Energy |
|  | Bioengineering, Civil Engineering, |
|  | Electrical Engineering, Electro- |
|  | Optics, Engineering Management, |
|  | Engineering Mechanics, |
|  | Management Science, Materials |
|  | Engineering, Renewable and Clean |
|  | Energy |
|  | Aerospace Engineering, |
|  | Bioengineering, Civil Engineering, |
|  | Electro-Optics*, Engineering |
|  | Management, Engineering |
|  | Mechanics, Management Science, |
|  | Materials Engineering, Mechanical |
|  | Engineering, Renewable and Clean |
|  | Energy |
|  | Engineering Management, |
|  | Management Science, Materials |
|  | Engineering |
|  | Electro-Optics, Materials |
|  | Engineering |
|  |  |

* This major may need additional courses to qualify for the master's program.

The department chairperson and the graduate program director serve as an advisory committee to the student in establishing the combined program requirements. The first-year, sophomore, and junior years follow the curriculum of the student's selected bachelor's program.

A student who elects the combined program must satisfy both undergraduate and graduate degree requirements as to required cumulative grade point average for graduation. The graduate of the combined program will receive a bachelor's degree in the undergraduate major (e.g., Bachelor of Mechanical Engineering) and a master's degree in the graduate area (e.g., Master of Science in Materials Engineering).
A student in the 5 -year combined program who chooses not to complete the program must complete all the undergraduate major program requirements to receive the bachelor's degree.

| Course Area Semester Hours <br> Senior Year 1st Term 2nd Term <br> Undergraduate <br> department major 11 11 <br> Undergraduate <br> department or 3 3 <br> University requirement <br> or electives   <br> Graduate major (taken <br> as graduate credit) 3 17 <br> Total semester hours 17 12 <br> Fifth Year   <br> Graduate major <br> (including thesis or <br> project)* 12 17 <br> * Civil Engineering majors require three additional semester hours for   <br> project option.   |
| :--- | :--- | :--- |

## ETHOS

Engineers in Technical, Humanitarian Opportunities of Service-Learning
The ETHOS Program is founded on the belief that engineers are more apt and capable of serving our world appropriately when they have experienced opportunities that increase their understanding of technology's global linkage with values, culture, society, politics, and economy. ETHOS seeks to provide these opportunities through international and domestic service internships as well as through collaborative research and hands-on classroom projects that support the development of appropriate technologies for the developing world.

Such experiences expose students to alternative nontraditional technologies that are based on fundamental science and engineering principles and at the same time provide tangible and immediate impacts improving the lives of those who use them. ETHOS maintains as its educational objective to challenge students to think creatively and independently, to work as a team and communicate effectively, and to address issues of appropriate technology, environmental ethics, social responsibility, and cultural sensitivity.

## Optional Cooperative Education

Cooperative education offers the student the opportunity to put classroom work into practical use while still in school, resulting in early career identification and greater motivation as well as providing a source of funds. All students majoring in engineering and engineering technology may participate in the cooperative education program. To be eligible, students must have completed three semesters and have a cumulative grade-point average of not less than 2.3. Those applying for the program will be accepted on the basis of grade-point average, motivation, and attitude. The number of students placed depends on the availability of jobs.

## Programs of Study

To learn more about the available programs in the School of Engineering, explore the departments:

- Chemical and Materials Engineering (p. 351)
- Civil and Environmental Engineering and Engineering Mechanics (p. 360)
- Electrical and Computer Engineering (p. 365)
- Engineering Management (p. 374)
- Engineering Technology (p. 374)
- Mechanical and Aerospace Engineering (p. 390)


## Chemical and Materials Engineering

Major:

- Bachelor of Chemical Engineering (p. 352)

Concentration:

- Energy Systems (p. 354)

Minors:

- Bioengineering (p. 355)
- Chemical Processing (p. 356)
- Composite Materials Engineering (p. 356)
- Energy Production Engineering (p. 356)
- Materials Engineering (p. 357)
- Polymer Materials (p. 357)

The Chemical \& Materials Engineering Department offers an undergraduate program leading to a Bachelor of Chemical Engineering degree. Chemical engineering applies the principles of the physical sciences, economics, and human relations to research, design, build, and supervise facilities that convert raw materials into useful products and services.

The majority of chemical engineers are involved in the chemical process industries that produce many of the materials and items needed in everyday life. These include medicine, food, fertilizers, plastics, synthetic fibers, petroleum, petrochemicals, ceramics, and pulp and paper products. A chemical engineer may pursue a professional career in many other fields, such as energy conversion, pollution control, medical research, and materials development in aerospace and electronic industries. Chemical engineers are employed in research, development, design, production, sales, consulting, and management positions. They
are also found in government and academia. Many use a chemical engineering education as a pathway to law, medicine, or corporate management.

The curriculum in chemical engineering serves as basic training for positions in these diverse areas of the manufacturing industry or for graduate study leading to advanced degrees. The first part of the chemical engineering curriculum provides a firm foundation in mathematics, physics, and chemistry. The chemistry background is stressed. The second part of the curriculum offers a balance between classroom and laboratory experience in stressing chemical engineering topics such as transport phenomena, thermodynamics, kinetics and reactor design, separation processes, fluid flow and heat transfer operations, process control, and process design. The development of design tools, communication, and interpersonal skills is integrated throughout the curriculum. The curriculum allows minors in emerging technologies such as bioengineering, environmental engineering and materials engineering. Those interested in attending medical/dental school can pursue a premed preparation as part of their curriculum.

The educational objectives of the chemical engineering program graduates are:

- Chemical Engineering graduates have successful careers in the chemical process industry with the skills necessary to have opportunities to work in non-traditional industries and positions.
- Chemcial Engineering graduates are successful at prestigious graduate, medical, and law schools.
- Chemical Engineering graduates are committed to performing ethically while serving their professions, companies, and communities.
- Chemical Engineering graduates exhibit strong critical thinking skills from the breadth of their general education and the depth of their foundation in engineering principles, and engage in continuous intellectual and personal growth.


## Faculty

Charles E. Browning, Department Chairperson
Michael Elsass, Chemical Engineering Director
Professors Emeriti: Lu, Snide
Professors: Browning, Eylon, Flach, Fried, Lafdi, Lee, Myers, T. Saliba, Sandhu, Wilkens
Associate Professor: Gold
Assistant Professor: D. Comfort, K. Comfort
Senior Lecturer: Ciric
Lecturer: Elsass

## Bachelor of Chemical Engineering (CME) minimum of 137 credit hours



| Oral Communication | 3 |
| :--- | :---: |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable <br> credit |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

| Advanced Study | variable <br> credit |
| :--- | ---: |
| Philosophy and/or Religious Studies |  |
| Historical Studies | 3 |
| Diversity and Social Justice | $0-3$ |
| Major Capstone |  |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Major Requirements

CHM 123 (https:// General Chemistry 3
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CHM 123L (https:// Gen Chemistry Lab
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CHM 124 (https:// General Chemistry
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CHM 124L (https:// Gen Chemistry Lab 1
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CHM 313 (https:// Organic Chemistry
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CHM 313L (https:// Organic Chemistry Lab 1
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| ```CHM 314 (https:// Organic Chemistry nextcatalog.udayton.edu courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text``` | 3 |
| :---: | :---: |
| CHM 314L (https:// Organic Chem Lab nextcatalog.udayton.edu/ courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text\&Toolbar=PageWizard) | 1 |
| ```CME 101 (https:// Intro to CME (2 nextcatalog.udayton.edusemesters) courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text,``` | 0-1 |
| CME 200 (https:// Prof Development Sem nextcatalog.udayton.edu(2 semesters) courseleat/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text\&Toolbar=PageWizard) | 0-1 |
| ```CME 203 (https:// Matl\&Energy Balance nextcatalog.udayton.edu courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text,``` | 3 |
| CME 281 (https:// Chm Engr Computatns nextcatalog.udayton.edu/ courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text\&Toolbar=PageWizard) | 3 |
| ```CME 306 (https:// CME Rctn Kntcs\&Engr nextcatalog.udayton.edu courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text,``` | 3 |
| CME 311 (https:// Chm Engr Thrmdynmcs nextcatalog.udayton.edu/ courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text\&Toolbar=PageWizard) | 3 |
| ```CME 324 (https:// Transport Phenom I nextcatalog.udayton.edu courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text,``` | 3 |
| CME 325 (https:// Transport Phenom II nextcatalog.udayton.edu/ courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text\&Toolbar=PageWizard) | 3 |
| ```CME 326L (https:// Transport Phenom Lab nextcatalog.udayton.edu courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text.``` | 2 |
| CME 365 (https:// Separatn Techniques nextcatalog.udayton.edu/ courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text\&Toolbar=PageWizard) | 3 |

CME 381 (https:// Adv Math-Chem Engrs 3 nextcatalog.udayton.edu courseleaf/js/fckeditor/ editor/fckeditor.html? InstanceName=attr_text,
CME 408 (https:// Seminar (2 semesters) 0-1
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CME 430 (https:// CME Design I 3
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CME 431 (https:// CME Design II 3
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CME 452 (https:// Process Control
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CME 465 (https:// Fluid Flow\&Ht Tr Pro
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CME 466L (https:// Chem Engr Oper Lab 2
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or ENG 200H (https:// Writing Seminar II
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PHL 103 (https:// Intro To Philosophy
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REL 103 (https:// Int Rel\&Theo Studies 3
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Chemistry or Biology elective ${ }^{1} 3$
CME elective ${ }^{1} 3$
Elective ${ }^{2} \quad 3$
Electives 12
Engineering/Science electives ${ }^{1} \quad 6$
Total Hours

1 Must be selected from list approved by the Chemical and Materials Engineering Department.
2 Must be selected from approved list of PHL or REL ethics courses.

## Concentration in Energy Systems Chemical (CES)

This concentration is open to all engineering students. The Energy Systems Concentration provides an interdisciplinary concentration in energy systems and its social consequences. Students completing this concentration will be prepared for jobs in both industrial and building energy systems, a rapidly growing market.

| $\begin{aligned} & \text { ASI } 320 \\ & \text { (p. 351) } \end{aligned}$ | Cities and Energy ${ }^{1,2}$ | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { CME } 203 \\ & \text { (p. 351) } \end{aligned}$ | Matl\&Energy Balance | 3 |
| $\begin{aligned} & \text { CME } 311 \\ & (\mathrm{p} .351) \end{aligned}$ | Chm Engr Thrmdynmcs | 3 |
| $\begin{aligned} & \text { CME } 324 \\ & \text { (p. 351) } \end{aligned}$ | Transport Phenom I | 3 |
| $\begin{aligned} & \text { CME } 325 \\ & (\text { p. 351) } \end{aligned}$ | Transport Phenom II | 3 |
| CME 326L <br> (p. 351) | Transport Phenom Lab | 1-2 |
| $\begin{aligned} & \text { CME } 430 \\ & \text { (p. 351) } \end{aligned}$ | CME Design I | 3 |
| $\begin{aligned} & \text { CME } 431 \\ & \text { (p. 351) } \end{aligned}$ | CME Design II | 3 |



| CME 492 Chem \& Bio Sensors <br> (p. 351) |
| :--- |
| Total Hours |
| 1 Course cannot have already been chosen above. |
| Minor in Chemical Processing (CHP) |

This minor is open to civil, computer, electrical, and mechanical engineering majors. The program is designed to acquaint the student with industrial operations in the chemical process industries such as heat exchange, distillation, extraction, humidification, etc. The elective courses cover a wide range of topics to accommodate the student's special interests.

| CME 203 <br> (p. 351) | Matl\&Energy Balance | 3 |
| :--- | :--- | ---: |
| CME 324 <br> (p. 351) | Transport Phenom I | 3 |
| CME 365 <br> (p. 351) | Separatn Techniques | 3 |
| Select one course from: |  |  |
| CME 306 <br> (p. 351) | CME Rctn Kntcs\&Engr | 3 |
| CME 430 <br> (p. 351) | CME Design I |  |
| CME 452 <br> (p. 351) | Process Control |  |
| CME 465 | Fluid Flow\&Ht Tr Pro |  |
| (p. 351) |  |  |
| CME 499 | Special Problems |  |
| (p. 351) |  | 12 |
| Total Hours |  |  |

## Minor in Composite Materials Engineering (CMA)

This minor is open to chemical, civil, and mechanical engineering majors. The program is designed to expose the student to the design, processing, and characterization of composite materials and their various applications in industry.

| CME 510 | High Prf Therm-Polymr | 3 |
| :--- | :--- | ---: |
| (p. 351) |  |  |
| or MAT 510 |  |  |
| (p. 351) |  |  |$\quad$ High Prf Therm-Polymr $\quad 3$

Select two courses from: 6
CEE 540 Composites Design
(p. 351)
or MAT 540 Composite Design
(p. 351)

CEE 543 Analy Mech-Cmp Matls
(p. 351)
or MAT 543 Analy Mech-Cmp Matls
(p. 351)

CEE 546 Finite Elmnt Anly I
(p. 351)
or MEE 546
Finite Elmnt Anly I
(p. 351)

CME 509
Intro Polymr Science
(p. 351)
or MAT 509 Intro-Polymer Sci
(p. 351)

CME 527 Methds-Polymer Analy
(p. 351)
or MAT 527 Methds-Polymer Analy
(p. 351)

CME 528
(p. 351)
or MAT 528 Chem Behav of Matls
(p. 351)

CME 580 Polymers Durability
(p. 351)
or MAT 580 Polymer Durability
(p. 351)

Total Hours

## MINOR IN ENERGY PRODUCTION ENGINEERING (EPE)

This minor is open to all engineering majors. A selection of courses covering the production of energy:

| Select four course | es from: | 12 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { BIE/CME/RCL } \\ & 533 \text { (р. 351) } \end{aligned}$ | Biofuel |  |
| CME 486/586 <br> (p. 351) | Intro-Petroleum Engr |  |
| CME/MEE/ <br> RCL 524 <br> (p. 351) | Electrochemical Powr |  |
| $\begin{aligned} & \text { CHM/GEO } \\ & 234 \text { (p. 351) } \end{aligned}$ | Energy Resources |  |
| $\begin{aligned} & \text { ECE } 316 \\ & \text { (p. } 351 \text { ) } \end{aligned}$ | Intro Elec Enrgy Sys |  |
| $\begin{aligned} & \text { ECE } 583 \\ & \text { (p. } 351 \text { ) } \end{aligned}$ | Adv Photovoltaics |  |
| $\begin{aligned} & \text { MAT } 579 \\ & \text { (p. 351) } \end{aligned}$ | Mtls Adv Egr Appl |  |
| MEE 473/573/ <br> RCL 573 <br> (p. 351) | Renewable Energy Sys |  |
| $\begin{aligned} & \text { RCL } 590 \\ & \text { (p. 351) } \end{aligned}$ | Spec Probs in RCL ${ }^{1}$ |  |
| $\begin{aligned} & \text { RCL } 590 \\ & \text { (p. 351) } \end{aligned}$ | Spec Probs in RCL ${ }^{2}$ |  |
| $\begin{aligned} & \text { RCL } 590 \\ & \text { (p. 351) } \end{aligned}$ | Spec Probs in RCL ${ }^{3}$ |  |
| Total Hours |  | 12 |


| 1 | Must be Thermal Systems Analysis. |
| :--- | :--- |
| 2 | Must be Solar Energy Engineering. |
| 3 | Must be Wind Energy Engineering. |

## Minor in Materials Engineering (MAT)

This minor is open to all engineering majors. A general overview of materials with choice courses in polymers, composites, nanomaterials, and material characterization.

| $\begin{aligned} & \text { MAT } 501 \\ & \text { (p. 351) } \end{aligned}$ | Prin-Materials I | 3 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { MAT } 502 \\ & \text { (p. 351) } \end{aligned}$ | Prin of Materials II | 3 |
| Select two courses from: |  | 6 |
| CME 509 <br> (p. 351) | Intro Polymr Science |  |
| or MAT 509 <br> (p. 351) | Intro-Polymer Sci |  |
| CME 510 <br> (p. 351) | High Prf Therm-Polymr |  |
| or MAT 510 <br> (p. 351) | High Prf Therm-Polymr |  |
| CME 511 <br> (p. 351) | Prin of Corrosion |  |
| or MAT 511 <br> (p. 351) | Prin of Corrosion |  |
| CME 512 <br> (p. 351) | Adv Composites |  |
| or MAT 542 <br> (p. 351) | Adv Composites |  |
| CME 527 <br> (p. 351) | Methds-Polymer Analy |  |
| or MAT 527 <br> (p. 351) | Methds-Polymer Analy |  |
| CME 528 <br> (p. 351) | Chem Behav of Matls |  |
| or MAT 528 <br> (p. 351) | Chem Behav of Matls |  |
| $\begin{aligned} & \text { CME } 579 \\ & \text { (p. } 351 \text { ) } \end{aligned}$ | Energy Materials |  |
| or MAT 579 <br> (p. 351) | Mtls Adv Egr Appl |  |
| CME 580 <br> (p. 351) | Polymers Durability |  |
| or MAT 580 <br> (p. 351) | Polymer Durability |  |
| $\begin{aligned} & \text { MAT } 504 \\ & \text { (p. 351) } \end{aligned}$ | Technqs-Materls Anal |  |
| $\begin{aligned} & \text { MAT } 506 \\ & \text { (p. 351) } \end{aligned}$ | Mech Behavior-Matrls |  |
| MAT 507 | Intro-Ceramic Matrls |  |
| $\begin{aligned} & \text { MAT } 508 \\ & \text { (p. 351) } \end{aligned}$ | Prin-Materls Selectn |  |
| $\begin{aligned} & \text { MAT } 521 \\ & (\text { p. 351) } \end{aligned}$ | NDE/SHM |  |


| MAT 535 | High Temperture Matl |
| :--- | :--- |
| (p. 351) |  |
| MAT 541 | Exp Mech Cmpsite Mat |
| (p. 351) |  |
| MAT 543 <br> (p. 351) | Analy Mech-Cmp Matls |
| MAT 544 | Mech-Composite Struc |
| (p. 351) |  |
| MAT 575 <br> (p. 351) | Fracture \& Fatigue |
| MAT 577 | Lght Structrl Metals |
| (p. 351) |  |
| MAT 590 | Selected Readings |
| (p. 351) |  |
| MAT 595 | Special Problems |
| (p. 351) |  |
| MAT 601 | Surface Chem Solids |
| (p. 351) |  |
| MAT 604 | Nanostruc Matrls |
| (p. 351) |  |
| MEE 312 | Engr Materials I |
| (p. 351) |  |
| Total Hours |  |

## Minor in Polymer Materials (PME)

This minor is open to all engineering majors. Coverage of polymers including thermosets and thermoplastics and composite materials in which polymers are used as constituents. Methods of polymer processing and polymer characterization are also included.

| CME 509 | Introduction to Polymer Science - Thermoplastics | 3 |
| :--- | :--- | :--- |
| or MAT 509 | Introduction to Polymer Science-Thermoplastics |  |
| CME 510 | High Performance Thermoset Polymers | 3 |
| or MAT 510 | High Performance Thermostat Polymers |  |

Select two courses from: 6

| CME 512 | Advanced Composites |
| :--- | :--- |
| or MAT 542 | Advanced Composites |
| CME 527 | Methods of Polymer Analysis |
| or MAT 527 | Methods of Polymer Analysis |
| CME 528 | Chemical Behavior of Materials |
| or MAT 528 | Chemical Behavior of Materials |
| CME 580 | Polymer Decomposition, Degradation \& Durability |
| or MAT 580 | Polymer Durability |
| MAT 540 | Composite Design |
| MAT 543 | Analytical Mechanics of Composite Materials |
| Total Hours |  |

## First Year

Fall Hours Spring Hours

CME 101
CHM 123 (Satisfies CAP
Natural Science)
CHM 123L

Hours Spring

## Hours

0-1 CHM 1243
3 CHM 124L 1

1 CME 1010-1

| ENG 100 (Satisfies | 3 EGR 100 | 0 |
| :---: | :---: | :---: |
| CAP Writing Seminar |  |  |
| Requirement) |  |  |
| EGR 100 | 0 HST 103 (Satisfies CAP | 3 |
|  | First Year Humanities |  |
|  | Common |  |
| EGR 103 | 2 MTH 169 | 4 |
| MTH 168 (Satisfies CAP | 4 PHY 206 (Satisfies CAP | 3 |
| Math Requirement) | Natural Science) |  |
| PHL 103 (Satisfies CAP | 3 REL 103 (Satisfies CAP | 3 |
| First Year Humanities | First Year Humanities |  |
| Common) | Common |  |
|  | 16-17 | 17-18 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| CHM 313 | 3 CHM 314 | 3 |
| CHM 313L | 1 CHM 314L | 1 |
| CME 200 | 0 CME 200 | 0-1 |
| CME 203 | 3 CME 281 | 3 |
| EGR 202 | 3 CMM 100 (Satisfies CAP Communication) | 3 |
| ENG 200 (Satisfies CAP | 3 MTH 219 | 3 |
| Second Year Writing |  |  |
| Seminar) |  |  |
| MTH 218 | 4 PHY 207 | 3 |
|  | 17 | 16-17 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| CME 311 | 3 CME 306 | 3 |
| CME 324 | 3 CME 325 | 3 |
| CME 381 | 3 CME 326L | 2 |
| EGR 201 | 3 Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action) | 3 |
| Art Study (Satisfies CAP Art Study) | 3 CME 365 | 3 |
| Social Science (Satisifies CAP Social Science) | 3 EGR 203 | 3 |
|  |  |  |
|  | 18 | 17 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| Advanced REL (Satisfies | 3 Advanced HST (Satisfies | 3 |
| CAP Crossing Boundaries | CAP Crossing Boundaries) |  |
| Faith Traditions, Diversity and Social Justice) |  |  |
| CME 466L | 2 CME 453L | 2 |
| CME 430 | 3 CME 408 | 0 |
| CME 452 | 3 CME 431 | 3 |
| CME 408 | 0-1 CME Elective | 3 |
| CHM/BIO Elective | 3 TECH Elective | 3 |
| CME 465 | 3 CME Advanced Elective | 3 |
|  | 17-18 | 17 |

## CME 326L. Transport Phenomena Laboratory. 1-2 Hours

Viscosity, conductivity, diffusion coefficient measurements, velocity, temperature, concentration profiles, engineering instrumentation, and experimental error analysis. Prerequisite(s): CME 324. Corequisite(s): CME 325.

## CME 365. Separation Techniques. 3 Hours

Equilibrium staged separations: distillation, extraction and absorption, with an emphasis on distillation. Prerequisite(s): CME 311, CME 324.

CME 381. Advances Mathematics for Chemical Engineers. 3 Hours Study of analytical and numerical techniques to support upper-level chemical engineering classes. Vector analysis, matrices, differential equations, numerical integration and differentiation, root finding, and curve fitting ordinary and partial differential equations. Prerequisite(s): CME 281; MTH 219.

## CME 398. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## CME 408. Seminar. 0-1 Hours

Presentation of lectures on contemporary chemical engineering subjects by students, faculty, and engineers in active practice. Registration required of senior students only.
CME 409. Introduction to Polymer Science - Thermoplastics. 3 Hours Broad technical overview of the nature of synthetic macromolecules, including the formation of polymers and their structure, structure-property relationships, polymer characterization and processing, and applications of polymers. Fundmental topics such as viscoelasticity, the glassy state, time-temperature superposition, polymer transitions, and free volume will also be reviewed. The course focuses on thermoplastic polymers. Prerequisite(s): CHM 313, PHY 206, MTH 219.

## CME 410. High Performance Thermoset Polymers. 3 Hours

Survey of high performance thermoset resins, focusing on chemistry, processing and properties of six general resin families; vinyl ester, epoxy, phenolic, cyanate ester, bismaleimide, and polyimides. The course will include fundamental discussions of polymerization mechanisms, network structure development, rheology and time-temperature transformation, resin toughening, and structure-processing-property relationships. Characterization techniques will also be reviewed. Prerequisite(s): CHM 313.

## CME 412. Advanced Composites. 3 Hours

Materials and processing. Comprehensive introduction to advanced fiber reinforced polymeric matrix composites. Constituent materials and composite processing will be emphasized with special emphasis placed on structure-property relationships, the role of matrix in composite processing, mechanical behavior, and laminate processing. Specific topics will include starting materials, material forms, processing, quality assurance, test, methods, and mechanical behavior. Prerequisite(s): (CME 409 or CME 509 or MAT 501) or permission of instructor.

## CME 429. Computational Chemistry. 3 Hours

Introduction to computational chemistry including a discussion of ab initio, semiempical, and DFT methods and an overview of molecular mechanics and molecular simulation methods. Lectures are supplemented by simulation exercises using commercial programs such a Gaussian and Molecular Studio. Prerequisite(s):CHM 124 or permission of instructor.

CME 430. Chemical Engineering Design I. 3 Hours
Study of basic design concepts, safety and health issues, capital cost estimation, manufacturing cost estimation, basic economics and profitability analysis, materials of construction, materials selection and process vessel design. Prerequisite(s): CME 203.

## CME 431. Chemical Engineering Design II. 3 Hours

Project-based study of principles of process design and economics, use of process flowsheet simulators, short-cut design procedures, process optimization, and plant layout. Prerequisite(s): CME 306, CME 365, CME 430, CME 465.

## CME 432. Chemical Product Design. 3 Hours

Application of the design process to products based on chemical technology. Coverage of the entire design process from initial identification of product needs, to the generation and selection of product ideas, and culminating in the manufacture of a new product.

## CME 452. Process Control. 3 Hours

Mathematical models, Laplace transform techniques, and process dynamics. Feedback control systems, hardware, and instrumentation. Introduction to frequency response, advanced techniques, and digital control systems. Prerequisite(s): CME 381.

## CME 453L. Process Control Laboratory. 2 Hours

Team-based, project oriented study of process dynamics and digital control using computer-based data acquisition and control systems with a focus on real time process monitoring and control. Prerequisite(s): (CME 452 , CME 466L) or permission of instructor.

## CME 465. Fluid Flow \& Heat Transfer Processes. 3 Hours

Fluid mechanics, transportation and metering of fluids, heat transfer and its applications. Prerequisite(s): CME 311, CME 324.

## CME 466L. Chemical Engineering Unit Operations Laboratory. 2 Hours

Study of the equipment and utilization of various chemical engineering processes. Team based experimentation includes designing, and performing experiments on common chemical process unit operations apparatuses. After experimentation, students analyze data and compare with literature for experiment validation. Report writing and group presentations are emphasized. Prerequisite(s): CME 365. Corequisite(s): CME 465.

## CME 486. Introduction to Petroleum Engineering. 3 Hours

Introduction to the fundamental concepts in petroleum engineering. Petroleum topics include overviews of areas such as petroleum geology, petroleum fluids and thermodynamics, drilling and completion, and production and multiphase flow. In addition this course will cover refinery operations.

## CME 489. Principles of Biology for Bioengineers. 3 Hours

This course is designed for students with undergraduate majors in engineering or non-biological sciences. The focus of the course is to provide a common broad base of basic knowledge and terminology in the biological sciences required for coursework in the bioengineering emphasis tracts. Prerequisite(s): (BIO 151, BIO 152) or permission of instructor.

## CME 490. Introduction to Bioengineering. 3 Hours

This class provides an introduction to bioengineering - a branch of engineering focusing on biological systems, biomaterials, engineering applications in living systems, and many other areas. By the end of this course, students will be able to understand bioengineering applications and processes, and properly apply engineering fundamentals, including transport phenomena and reaction kinetics, to these systems. Prerequisite(s): (BIO 151, CME 324 or BIE 505) or permission of instructor.

## CME 491. Biomedical Engineering I. 3 Hours

Introduction to the fundamental concepts in biomedical engineering with a special focus on chemical engineering applications. Biomedical topics include overviews of areas such as biomaterials, tissue engineering, biosensors and biomedical engineering technology. Prerequisite(s): (BIO 151; (CHM 420 or CHM 451); CME 324, CME 365) or permission of instructor.

## CME 492. Chemical Sensors \& Biosensors. 3 Hours

Analysis performed with chemical sensors complement laboratory analyses and offer the potential for more rapid and on-line analyses in complex sample matrices. The demand for new chemical sensors, biosensors, and sensing concepts is rapidly increasing and associated with the growing need to understand and/or control complex chemical and biochemical processes or detect the presence of toxic chemical or biological agents. Prerequisite(s): Permission of instructor.

## CME 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## CME 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): CME 493.

## CME 498. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
CME 499. Special Problems in Chemical Engineering. 1-6 Hours
Particular assignments to be arranged and approved by chairperson of the department.

## Civil and Environmental Engineering and Engineering Mechanics

Major:

- Bachelor of Civil Engineering (p. 361)

Minors:

- Engineering Mechanics (p. 361)
- Environmental Engineering (p. 362)
- Structures (p. 362)
- Transportation Engineering (p. 362)
- Water Resources Engineering (p. 363)

The Department of Civil and Environmental Engineering and Engineering Mechanics offers a broad-based curriculum leading to a Bachelor of Civil Engineering (BCE) degree. The BCE program offers sufficient elective courses to obtain a concentration in construction, environmental engineering, structures, water resources, geotechnical or transportation.

The mission of the program is to graduate broadly educated, technically competent individuals prepared for professional careers or for advanced studies.

Within the first several years following completion of the program, University of Dayton Bachelor of Civil Engineering graduates are prepared to meet the following program educational objectives:

- have successful careers in civil engineering or other professions
- pursue advanced degrees in support of their chosen profession
- conduct professional and personal endeavors in a responsible and ethical manner
- seek service and leadership roles in their profession and community
- continue their professional and personal growth through a process of life-long learning.

Civil engineering is the profession in which knowledge of the mathematical and physical sciences gained by study, experience, and practice is applied with judgment to develop ways to economically utilize the materials and forces of nature in improving and protecting the environment and providing structures and facilities for community, industry, and transportation for the progressive well-being of humanity.

Civil engineers, leading users of high technology in wide-ranging applications in both the public and the private sectors, are essential to the continued improvement of society. Civil engineers can enter traditional fields such as construction, bridge and building design and analysis, highway design and traffic control, water treatment and distribution, environmental engineering, water resources, and geotechnics. Their broad education however, also prepares them for materials engineering, engineering management, and the aerospace, power, and automotive industries. Civil engineering has applications in conceptual and detail design, field operations, computers, and consulting.

Members of the student chapters of the American Society of Civil Engineers (ASCE), Chi Epsilon, Institute of Transportation Engineers (ITE), and National Society of Professional Engineers (NSPE) have the opportunity to meet regularly with practicing engineers in the Dayton community.

## Faculty

Donald V. Chase, Chairperson
Professors Emeriti: Bogner, J. Whitney
Distinguished Service Professor: Ryckman
Professor: J. Saliba
Associate Professor: Donaldson, Eustace, D. Taylor
Assistant Professors: Bilgin, Crosson, Toubia, T. Whitney
Lecturer: Alakkad
Visiting Professor: Chase

## Bachelor of Civil Engineering (cee) minimum of 138 credit hours

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humani | nities Commons ${ }^{1}$ | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar ${ }^{2}$ |  |
| Second-Year Writi | ing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communicati |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variab |


| Faith Traditions |
| :--- |
| Practical Ethical Action |
| Inquiry |
| Integrative |
| Advanced Study |
| Philosophy and/or Religious Studies |
| Historical Studies |
| Diversity and Social Justice |
| Major Capstone |
| 1 Completed with ASI 110 and ASI 120. |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |
| 3 Completed with ENG 200H or ASI 120. |

## Major Requirements

| CEE 101 | Introduction to Civil Engineering (2 semesters) | 0 |
| :--- | :--- | :--- |
| CEE 200 | Professional Development Seminar (2 semesters) | 0 |
| CEE 213 | Surveying | 2 |
| CEE 214 | Highway Geometrics | 2 |
| CEE 215L | Surveying Field Practice | 3 |
| CEE 221L | Civil Computation Laboratory | 2 |
| CEE 300 | Seminar (2 semesters) | 0 |
| CEE 311 | Civil Engineering Materials | 3 |
| \& 311L | and Civil Engineering Materials Laboratory |  |
| CEE 312 | Geotechnical Engineering | 4 |
| \& 312L | and Geotechnical Engineering Laboratory | 4 |
| CEE 313 | Hydraulics | 4 |
| \& 313L | and Hydraulics Laboratory | 4 |
| CEE 316 | Analysis of Structures I | 3 |
| CEE 333 | Water Resources Engineering | 3 |
| CEE 400 | Professional Development Seminar (2 semesters) | 0 |
| CEE 403 | Transportation Engineering | 3 |


| CEE 411 | Design of Steel Structures | 3 |
| :---: | :---: | :---: |
| CEE 412 | Design of Concrete Structures | 3 |
| CEE 425 | Civil Engineering Systems | 3 |
| $\begin{aligned} & \text { CEE } 434 \\ & \& 434 \mathrm{~L} \end{aligned}$ | Water \& Wastewater Engineering and Water \& Wastewater Engineering Laboratory | 4 |
| CEE 450 | Civil Engineering Design ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { CHM } 123 \\ & \& 123 \mathrm{~L} \end{aligned}$ | General Chemistry and General Chemistry Laboratory | 4 |
| CHM 124 | General Chemistry | 3 |
| CMM 100 | Principles of Oral Communication | 3 |
| EGM 202 | Dynamics | 3 |
| EGM 303 | Mechanics II | 3 |
| EGR 100 | Enrichment Workshop (2 semesters) | 0 |
| EGR 103 | Engineering Innovation | 2 |
| EGR 201 | Engineering Mechanics | 3 |
| EGR 202 | Engineering Thermodynamics | 3 |
| EGR 203 | Electrical \& Electronic Circuits | 3 |
| ENG 100 <br> \& ENG 200 | Writing Seminar I and Writing Seminar II | 6 |
| or ENG 200H | Writing Seminar II |  |
| GEO 218 | Engineering Geology | 3 |
| HST 103 | The West \& the World | 3 |
| or HST 198 | History Scholars' Seminar |  |
| HST 343 | History of Civil Engineering | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 219 | Applied Differential Equations | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 206 | General Physics I-Mechanics | 3 |
| PHY 207 | General Physics II - Electricity \& Magnetism | 3 |
| REL 103 | Introduction to Religioius \& Theological Studies | 3 |
| CEE electives ${ }^{3,4}$ |  | 9 |
| Electives |  | 12 |
| Tech elective |  | 3 |
| Total Hours |  | 138 |

1 Admittance into CEE 450 requires successful completion of all required engineering courses with an average academic unit GPA of no less than 2.0, or approval of the chair.
2 Three semester hours waived if accepted into ENG 200 H .
3 Select from list approved by the Department of Civil and Environmental Engineering and Engineering Mechanics.
4 May be used to concentrate studies in the areas of construction, environmental, structures, geotechnical, transportation, and water resources engineering.

## Minor in Engineering Mechanics (eme)

This minor is open to all engineering majors. The program provides a broad treatment of engineering mechanics including theoretical, numerical, and experimental topics.

Select four courses from: ${ }^{1}$

| or EGM 540 | Composite Design |
| :--- | :--- |
| EGM 303 | Mechanics II |
| EGM 503 | Introduction to Continuum Mechanics |
| EGM 511 | Experimental Stress Analysis |
| EGM 533 | Theory of Elasticity |
| EGM 546 | Finite Element Analysis I |
| MAT 540 | Composite Design |
| MEE 504 | Fundamentals of Fluid Mechanics |
| Total Hours |  |

1 Courses selected may not be those already required for student's major.

## Minor in Environmental Engineering (eve)

This minor is open to all non-civil engineering majors. The program defines contemporary problems of pollution and identifies the technological approaches necessary to preserve the quality of our environment.

Select four courses from: ${ }^{1}$

| CEE 390 | Environmental Pollution Control ${ }^{2}$ |
| :--- | :--- |
| CEE 434 | Water \& Wastewater Engineering ${ }^{3}$ |
| CEE 499 | Special Problems in Civil Engineering ${ }^{4}$ |
| or CME 499 | Special Problems in Chemical Engineering |
| CEE 560 | Biological Processes in Wastewater Engineering |
| CEE 562 | Physical \& Chemical Water \& Wastewater |
|  | Treatment Processes |
| CEE 563 | Hazardous Waste Engineering |
| or CME 563 | Hazardous Waste Engineering |
| CEE 564 | Solid Waste Engineering |
| CEE 574 | Fundamentals of Air Pollution Engineering I |
| CEE 575 | Fundamentals of Air Pollution Engineering II |
| or CME 575 | Fundamentals of Air Pollution Engineering II |
| CEE 576 | Environmental Engineering Separation Processes |
| CHM 341 | Environmental Chemistry |
| EGR 330 | Engineering Design \& Appropriate Technology ${ }^{4}$ |
| Total Hours |  |

1 Courses selected may not be those already required for student's major. It is recommended the minor include one course pertaining to water, air, and solid pollution control.
2 Not permissible for CME students.
3 Or CEE 595 Special Problems in Civil Engineering.
4 No more than three credit hours of EGR 330, CEE 499, or other special project coursework may be applied to this minor. Subject to approval of the CEE chairperson within two weeks of the start of the semester.

## Minor in Structures (str)

This minor is open to all non-civil engineering majors. The program provides a broad coverage of general concepts of structural design as applied to buildings, mechanical systems, and machinery.

Select four courses from:

| CEE 311 | Civil Engr Materials |
| :--- | :--- |
| (p. 360) | and Civil Engr Matls Lab |
| \& 311L |  |
| (p. 360) |  |
| CEE 316 | Analy of Strctures I |
| (p. 360) |  |
| CEE 411 | Dsg-Steel Structures |
| (p. 360) |  |
| CEE 412 | Dsgn-Concrete Struc |
| (p. 360) |  |
| CEE 500 | Adv Struct Analysis |
| (p. 360) |  |
| CEE 501 | Struct. Analysis by Computer |
| (p. 360) |  |
| CEE 502 | Prestressed Concrete |
| (p. 360) |  |
| CEE 504 | Structural Dynamics |
| (p. 360) |  |
| CEE 505 | Plastic Design in Steel |
| (p. 360) |  |
| CEE 507 | Masonry Design |
| (p. 360) |  |
| CEE 508 | Design Timber Struc |
| (p. 360) |  |
| CEE 524 | Foundation Engr |
| (p. 360) |  |
| CEE 540 | Composites Design |
| (p. 360) |  |

## Minor in Transportation Engineering (tre)

This minor is open to all non-civil engineering majors. The program provides broad coverage in the planning, design, operations, and management of the transportation system.

CEE 595 Special Problems-CEE
$\frac{\text { (p. 360) }}{}$ Total Hours

$1 \quad$| Courses selected may not be those already required for student's |
| :--- |
| major. |

Minor in Water Resources Engineering
(wre)

This minor is open to all non-civil engineering majors. The program provides broad coverage to the general concepts used in water resources engineering including hydraulics and hydrology issues within economic, optimization, operation, and management frameworks.

| Select four courses from: ${ }^{1}$ | 12 |  |
| :--- | :--- | :--- |
| CEE 313 | Hydraulics |  |
| (p. 360) |  |  |
| CEE 333 <br> (p. 360) | Water Resources Engr |  |
| CEE 580 | Hydrology \& Seepage |  |
| (p. 360) |  |  |
| CEE 582 | Adv Hydraulics |  |
| (p. 360) |  |  |
| CEE 584 <br> (p. 360) | Open Flow Channel |  |
| CEE 595 <br> (p. 360) | Special Problems-CEE |  |
| Total Hours |  | 12 |

## 1 Courses selected may not be those already required for student's major.

## First Year

| Fall | Hours Spring | Hours |
| :---: | :---: | :---: |
| EGR 100 | 0 EGR 100 | 0 |
| HST 103 (Satisfies CAP <br> First-Year Humanities Common) | 3 CMM 100 | 3 |
| PHY 206 (Satisfies CAP Natural Science) | 3 EGR 201 | 3 |
| MTH 168 (Satisfies CAP Math Requirement) | 4 MTH 169 | 4 |
| PHL 103 (Satisfies CAP <br> First-Year Humanities Common) | 3 REL 103 (Satisfies CAP First Year Humanities Common) | 3 |
| CEE 101 | 0 CEE 101 | 0 |
| EGR 103 | 2 CHM 123 (Satisfies CAP Natural Science) | 3 |
| ENG 100 (Satisfies CAP Writing Seminar) | 3 CHM 123L (Satisifies CAP Natural Science) | 1 |
|  | 18 | 17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| CEE 221L | 2 GEO 218 (Satisfies CAP Crossing Boundaries \& Inquiry ) | 3 |

4

3

## Second Year

Inquiry )

| PHY 207 | 3 EGM 303 | 3 |
| :--- | :--- | ---: |
| EGM 202 | 3 EGR 202 | 3 |
| MTH 218 | 4 MTH 219 | 3 |
| CEE 213 | 2 CEE 214 | 2 |
| CEE 200 | 0 CEE 200 | 0 |
| CHM 124 | 3 ENG 200 (Satisfies CAP | 3 |
|  | Second Year Writing |  |
|  | Seminar) |  |
|  | CEE 215L (SUMMER) | 3 |
|  | $\mathbf{1 7}$ | $\mathbf{2 0}$ |

Third Year
Fall
CEE 300
CEE 313
\& 313L
CEE 316

CEE 403
EGR 203
Advanced PHL Ethics
(Satisfies CAP Crossing Boundaries and Practical Ethical Action)

Fourth Year
Fall
CEE 400
CEE 412

CEE 434
\& 434L
CEE Elective
CEE Elective

Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)

## CEE 198. Research \& Innovation Laboratory. 1,6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## CEE 200. Professional Development Seminar. 0 Hours

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

## CEE 213. Surveying. 2 Hours

Theory of measurements, computation, and instrumentation. Boundary and construction surveys, triangulation, and level net adjustments. First term, each year. Corequisite(s): MTH 168.

## CEE 214. Highway Geometrics. 2 Hours

Study of circular and spiral curves, vertical curves, grade lines, earthwork and mass diagram, slope and grade stakes, and contour grading. Second term, each year. Prerequisite(s): CEE 213.

## CEE 215L. Surveying Field Practice. 3 Hours

Field work and computation in topography, highway surveying, triangulation, level net, celestial observations, evaluation of errors, and preparation of plans. Five eight-hour days a week for three weeks.
Summer, each year. Prerequisite(s): CEE 214.

## CEE 221L. Civil Computation Laboratory. 2 Hours

Introduction to commonly-used software in civil engineering profession. Emphasis on the use of spreadsheets to solve civil engineering problems. Introduction to computer aided drawing and design and the use of popular CADD packages in the civil engineering profession.

## CEE 298. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
CEE 300. Seminar. 0 Hours
Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required of all civil engineering juniors.

## CEE 310L. Civil Engineering Laboratory. 1 Hour

Civil Engineering Laboratory.

## CEE 311. Civil Engineering Materials. 2 Hours

Physical and mechanical properties of construction materials; Portland cement concrete, bituminous materials, wood, ferrous and non-ferrous metals, masonry units; proportioning of concrete mixtures including admixtures. Prerequisite(s): EGM 303. Corequisite(s): CEE 311L.

CEE 311L. Civil Engineering Materials Laboratory. 1 Hour Laboratory experiments in the physical and mechanical properties of construction materials; Portland cement concrete, bituminous materials, wood, ferrous and non-ferrous metals, and masonry units; proportioning of concrete mixtures including admixtures. Corequisite(s): CEE 311.

CEE 312. Geotechnical Engineering. 3 Hours
Principles of soil structures, classification, capillarity, permeability, flow nets, shear strength, consolidation, stress analysis, slope stability, lateral pressure, bearing capacity, and piles. Second term, each year. Prerequisite(s): CEE 313; EGM 303. Corequisite(s): CEE 312L; GEO 218.

CEE 312L. Geotechnical Engineering Laboratory. 1 Hour
Laboratory tests to evaluate and identify soil properties for engineering purposes. Design problems are also included. Second term, each year. Corequisite(s): CEE 312.

## CEE 313. Hydraulics. 3 Hours

Basic principles of fluid mechanics in closed conduits and open channels. Principles include fluid statics, conservation of mass, conservation of momentum, conservation of energy, and fluid dynamics. Presentation of fluid mechanics principles through the solution of practical problems and a comprehensive semester project. Prerequisite(s): EGM 202. Corequisite(s): CEE 313L.

## CEE 313L. Hydraulics Laboratory. 1 Hour

Laboratory experiments and problems associated with CEE 313. Corequisite(s): CEE 313.

## CEE 316. Analysis of Structures I. 3 Hours

Elastic analysis of structures; deflection, moment-area theorems; conjugate-beam; virtual work influence lines; analysis of indeterminate structures using force methods; theories of failure, stiffness matrices, and use of software to analyze structures. Prerequisite(s): EGM 303.

## CEE 317. Analysis of Structures II. 3 Hours

Elastic analysis of structures; virtual work; Castigliano's theorems; slope deflection and moment distribution; computer analysis of structural systems, influence lines, column analogy, limit analysis. Departmental elective. Prerequisite(s): CEE 316.

## CEE 333. Water Resources Engineering. 3 Hours

Integrated study of the principles of water movement and management. Focus areas include hydrology, water distribution, storm water management, and waste water collection. Second semester, each year. Prerequisite(s): CEE 313.

## CEE 390. Environmental Pollution Control. 3 Hours

Study of environmental pollution problems relating to air, water, and land resources. Causes and effects of pollution technology for solving problems. Legal and political considerations. For juniors and seniors other than civil engineering students. Credit may not be applied toward civil engineering degree. Prerequisite(s): Some knowledge of chemistry.

## CEE 398. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## CEE 400. Professional Development Seminar. 0 Hours

Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required of all civil engineering seniors.

## CEE 403. Transportation Engineering. 3 Hours

Fundamentals of transportation engineering, including design, construction, maintenance, and economics of transportation facilities. Design of pavement structures and drainage systems. Prerequisite(s): CEE 214.

## CEE 408. Seminar. 0 Hours

Seminar in Civil \& Environmental Engineering.

## CEE 411. Design of Steel Structures. 3 Hours

Design and behavior of structural steel connections, columns, beams, and beams subjected to tension, compression, bending, shear, torsion, and composite action. Second semester, each year. Prerequisite(s): CEE 316.

## CEE 412. Design of Concrete Structures. 3 Hours

Design and behavior of reinforced concrete slabs, beams, columns, walls, and footings subjected to tension, compression, bending, shear, and torsion. First semester, each year. Prerequisite(s): CEE 311, CEE 316.

CEE 420. Engineering Economics. 1 Hour
Basic principles and techniques of economic analysis of engineering projects. Prerequisite(s): MTH 169.

## CEE 421. Construction Engineering. 3 Hours

Organization, planning, and control of construction projects, including a study of the use of machinery, economics of equipment, methods, materials, estimates, cost controls, and fundamentals of CPM and PERT contracts and bonds and legal aspects of contracting. Departmental elective.
CEE 422. Design \& Construction Project Management. 3 Hours
Fundamentals of project management as they relate to the design and construction professional, and the application of project management techniques to the design and construction of major projects. Departmental elective.
CEE 425. Civil Engineering Systems. 3 Hours
Analysis and evaluation of civil engineering systems using operations research tools including systems modeling, optimization and probability, and statistics. Civil engineering systems will also be examined from an economic perspective. Prerequisite(s): Junior or senior status.

## CEE 434. Water \& Wastewater Engineering. 3 Hours

Problems of water pollution; development and design of public water supply and waste water treatment systems; legal, political, ethical, and moral considerations. First term, each year. Prerequisite(s): CHM 124. Corequisite(s): CEE 313, CEE 434L.
CEE 434L. Water \& Wastewater Engineering Laboratory. 1 Hour Laboratory exercises, demonstrations, and design problems associated with water and wastewater engineering. First semester, each year. Corequisite(s): CEE 434.

## CEE 450. Civil Engineering Design. 3 Hours

Group design of complete projects, drawing on the knowledge acquired in a spectrum of civil engineering subjects. Second semester, each year. Prerequisite(s): CEE 312, CEE 333, CEE 403, CEE 411, CEE 412, CEE 434.

## CEE 463. Hazardous Waste Treatment. 3 Hours

The fundamental principles of the design and operation of hazardous waste control and hazardous substances remediation processes. Hazardous waste regulations, risk assessment, and management. Department Elective. Prerequisite(s): CHM 124.

## CEE 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## CEE 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): CEE 493.

## CEE 498. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.
CEE 499. Special Problems in Civil Engineering. 1-6 Hours
Particular assignments to be arranged and approved by chairperson of the department. Departmental elective.

## Engineering Mechanics Courses

## EGM 202. Dynamics. 3 Hours

Kinematics, including translation, rotation, plane motion, and relative motion; kinetics of particles and bodies by the methods of force-massacceleration, work-energy, and impulse-momentum. Each semester, each year. Prerequisite(s): EGR 201.

## EGM 303. Mechanics II. 3 Hours

The study of stresses, strains, and deflections in tension, compression, shear, flexure, and torsion; shear and moment diagrams; analysis of stresses and strains at a point; Mohr's circle; analysis of columns. Each semester, each year. Prerequisite(s): EGR 201.

## EGM 304. Advanced Strength of Materials. 3 Hours

Stresses and strains at a point; shear center; unsymmetrical bending; curved beams; flat plates; torsion of noncircular bars; beams on elastic support; buckling; introduction to mechanics of composite materials. First and second terms each year. Prerequisite(s): EGM 303.
EGM 499. Special Problems in Engineering Mechanics. 1-6 Hours Particular assignments to be arranged and approved by chairperson of the department.

## Electrical and Computer Engineering

Majors:

- Bachelor of Electrical Engineering (p. 366)
- Bachelor of Science, Computer Engineering (p. 368)

Concentrations:

- Electrical Energy Systems (p. 369)
- Electro-Optics (p. 369)
- Robotics (p. 369)

Minors:

- Computer Systems (p. 369)
- Signals and Systems (p. 369)

The Department of Electrical and Computer Engineering offers two ABET accredited undergraduate programs leading to the Bachelor of Electrical Engineering and the Bachelor of Science in Computer

Engineering. The department offers masters and doctoral degrees in electrical engineering and is closely coupled to the graduate program in electro-optics where both master's and doctoral degrees are offered. The electrical and computer engineering department offers an accelerated 5 year B.S. - M.S. program, where students completing their baccalaureate degree can attain their Master of Science in Electrical Engineering within one additional year. The department also offers an undergraduate concentration in electro-optics, in collaboration with the Physics Department and the Electro-Optics Program. An Undergraduate concentration in Robotics is available for both Electrical and Computer Engineering majors beginning in Fall 2011. A new undergraduate concentration in Electrical Engineering Systems is also available beginning in Fall 2012.

The mission of the Department of Electrical and Computer Engineering is to develop in students the skills and knowledge to learn, lead and serve in their profession and their community.

Our electrical engineering alumni will be prepared to:

1. find rewarding careers as engineering professionals. As electrical engineers they will be prepared to design and develop new products, technologies and processes that incorporate one or more of the following elements: analog and digital circuits, signals and systems, propagation and processing of signals, and control systems.
2. continue their professional education either formally, in graduate school, professional schools, or through industrial training programs; or informally, though activities such as continuing education, attendance in short courses, professional workshops and conferences.
3. exercise and further develop their skills in professional communication through activities such as project briefings, conference presentations, technical reports and manuals, and journal publications.
4. participate in activities for the betterment of society, and carry on the traditions of the University of Dayton by maintaining high ethical standards in their professional activities, and by serving their country and community through service, leadership and mentoring.

Our computer engineering alumni will be prepared to:

1. find rewarding careers as engineering professionals. As computer engineers they will be prepared to design and develop new products, technologies and processes that incorporate one or more of the following elements: analog and digital circuits, signals and systems, computer design, software development, and hardware/software integration.
2. continue their professional education either formally, in graduate school, professional schools, or through industrial training programs; or informally, though activities such as continuing education, attendance in short courses, professional workshops and conferences.
3. exercise and further develop their skills in professional communication through activities such as project briefings, conference presentations, technical reports and manuals, and journal publications.
4. participate in activities for the betterment of society, and carry on the traditions of the University of Dayton by maintaining high ethical standards in their professional activities, and by serving their country and community through service, leadership and mentoring.

Electrical engineering is an exciting field within the engineering discipline. It offers the opportunity to enter some of the most rewarding and challenging careers available. The explosion of capabilities in the computer, communication, automotive, medical, entertainment and aerospace industries, as well as homeland security has resulted from advances in the electronics field. Electrical engineers are equipped to enter this dynamic arena as well as equally challenging and rewarding careers in the fields of electro-optics, communication, radar, signal and image processing, biomedicine, controls, robotics and instrumentation, and many more. Electrical engineers work in all phases of technological programs. They are involved from the conception of the basic ideas through design, fabrication, verification, manufacturing, and marketing of the final product.

Computer engineering represents perhaps the most sought-after professional component of an engineering team which develops the technological possibilities inherent in the design, construction, and operation of computer systems. The computer engineer performs a wide variety of tasks involving hardware, software, peripherals, computercontrolled systems, and hardware-software integration, as well as computer applications in the multitude of areas listed in the previous paragraph.

Both electrical engineering and computer engineering are broad-based engineering disciplines that provide for a wide range of career choices within the engineering field as well as providing an excellent basis for careers in such diverse areas as business, law, and medicine.

The electrical engineering curriculum is designed to provide an understanding of basic electrical engineering principles with emphasis on the development of problem solving skills. The computer engineering curriculum draws from software courses taken in computer science and hardware related courses taken from Electrical and Computer Engineering, culminating in the integration of hardware and software in systems design. An extensive laboratory experience is integrated with the classroom work to assure that the student develops a working knowledge of the fundamentals. Upper level courses integrate the knowledge base with current technology and computational tools resulting in a graduate capable of making a contribution to the engineering profession by either entering the work force or pursuing a graduate education.

## Faculty

Guru Subramanyam, Chairperson
Professors Emeriti: Evers, Kee, Rogers, Scarpino, Thiele, Williamson Professors: Asari, Banerjee, Chatterjee, Duncan, Hardie, Haus, Moon, Ordonez, Sarangan, Subramanyam, Vorontsov, Weber, Wicks, Zhan Associate Professors: Daniels, Guliants, Loomis, Penno, Taha Assistant Professors: Balster, Hirakawa
Adjunct Professors: Barrera, Coutu, Kessler, Kim, Malas, Patterson, Wang

## Bachelor of Electrical Engineering (ele) minimum of 134 credit hours

## Common Academic Program (CAP)

*credit hours will vary depending on courses selected

## First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |
| ENG 100 | Writing Seminar I ${ }^{2}$ |


| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 | $\begin{aligned} & \text { ECE } 332 \\ & \text { (p. } 365 \text { ) } \end{aligned}$ | Electromagnetics | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ENG 200 | Writing Seminar II |  |  |  |  |
| Oral Communication |  | 3 | ECE 333 | Appl Electromagnetcs | 3 |
| CMM 100 | Principles of Oral Communication |  | (p. 365) |  |  |
| Mathematics |  | 3 | $\begin{aligned} & \text { ECE } 334 \\ & \text { (p. 365) } \end{aligned}$ | Discrete Signals\&Sys | 3 |
| Social Science |  | 3 | ECE 340 | Engr Prblty\&Rndm Prc | 3 |
| Arts |  | 3 | (p. 365) |  |  |
| Natural Sciences |  | 7 | ECE 401 | Communictn Systems | 4 |
| Crossing Boundaries |  | variable credit | $\begin{aligned} & \text { (p. 365) } \\ & \& 401 \mathrm{~L}(\mathrm{p} .365) \end{aligned}$ | and Communicatn Sys Lab |  |
| Faith Traditions |  |  | ECE 415 | Control Systems | 3 |
| Practical Ethical Action |  |  | (p. 365) |  |  |
| Inquiry |  |  | ECE 431L | Multdsply Design I | 1 |
| Integrative |  |  | (p. 365) |  |  |
| Advanced Study |  | variable credit | $\begin{aligned} & \text { ECE 432L } \\ & \text { (p. 365) } \end{aligned}$ | Mutdsply Design II | 3 |
| Philosophy and/or Religious Studies |  |  | $\begin{aligned} & \text { ECE } 433 \\ & \text { (p. } 365 \text { ) } \end{aligned}$ | Proj Mangmt\&Innovtn | 1 |
| Historical Studies |  |  |  |  |  |
| Diversity and Social Justice |  | 3 | (p. 365) | Enrichment Workshop (2 semesters) | 0 |
| Major Capstone |  | 0-3 | EGR 103 <br> (p. 365) | Engineering Innovatn | 2 |
| 1 Completed with ASI 110 and ASI 120. |  |  |  |  |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement. |  |  | $\begin{aligned} & \text { EGR } 201 \\ & \text { (p. 365) } \end{aligned}$ | Engr Mechanics | 3 |
| 3 Completed with ENG 200H or ASI 120. |  |  | EGR 202 <br> (p. 365) | Engr Thermodynamics | 3 |
| Major Requirements |  |  | EGR 203 | Electrcl \& Elctrnc Crt | 3 |
| CHM 123 <br> (p. 365) | General Chemistry | 3 | (p. 365) |  | 6 |
| CMM 100 <br> (p. 365) | Principles of Oral Communication | 3 | (p. 365) <br> \& ENG 200 | and Writing Seminar II | 6 |
| $\begin{aligned} & \text { CPS } 150 \\ & \text { (p. 365) } \end{aligned}$ | Algorthm\&Progrm I | 4 | (p. 365) | riting Seminar II |  |
| $\begin{aligned} & \text { ECE } 101 \\ & \text { (p. } 365 \text { ) } \end{aligned}$ | Intro to Elec Engr (2 semesters) | 0 | (p. 365) |  |  |
|  |  |  | HST 103 | West and the World | 3 |
| $\begin{aligned} & \text { ECE } 200 \\ & \text { (p. } 365 \text { ) } \end{aligned}$ | Sophomore Seminar (2 semesters) | 0 | (p. 365) |  |  |
| $\begin{aligned} & \text { ECE 201L } \\ & (\text { p. 365) } \end{aligned}$ | Circuit Anlys Lab | 1 | (p. 365) | HST Scholars Sem |  |
|  |  |  | MTH 168 | Anly Geom \& Calc I | 4 |
| $\begin{aligned} & \text { ECE } 203 \\ & \text { (p. } 365 \text { ) } \end{aligned}$ | Intro Matlab Prog | 1 | (p. 365) |  |  |
|  |  |  | MTH 169 | Anly Geom \& Calc II | 4 |
| $\begin{aligned} & \text { ECE } 204 \\ & \text { (p. 365) } \\ & \text { \& } 204 \mathrm{~L} \text { (p. 365) } \end{aligned}$ | Electronic Devices | 4 | (p. 365) |  |  |
|  |  |  | MTH 218 <br> (p. 365) | Anly Geom \& Calc III | 4 |
| $\begin{aligned} & \text { ECE } 215 \\ & \text { (p. 365) } \\ & \& 215 \mathrm{~L}(\mathrm{p} .365) \end{aligned}$ | Introduction to Digital Systems and Digital Systems Lab | 4 | MTH 219 <br> (p. 365) | Appl Diff Equations | 3 |
| ECE 303 <br> (p. 365) <br> \& 303L (p. 365) | Signals \& Sytems and Signals \& Systems Lab | 4 | $\begin{aligned} & \text { MTH } 310 \\ & \text { (p. 365) } \end{aligned}$ | Lin Alg \& Matrices | 3 |
|  |  |  | $\begin{aligned} & \text { PHL } 103 \\ & \text { (p. } 365 \text { ) } \end{aligned}$ | Intro To Philosophy | 3 |
| ECE 304 <br> (p. 365) <br> \& 304L (p. 365) | Electrnc Systems and Electrnc Systems Lab | 4 | PHL 316 <br> (p. 365) | Engineering Ethics | 3 |
| $\begin{aligned} & \text { ECE } 314 \\ & \text { (p. 365) } \\ & \& 314 \mathrm{~L}(\mathrm{p} .365) \end{aligned}$ | Fund-Comptr Arch and Fund-Comptr Arch Lab | 4 | $\begin{aligned} & \text { or PHL } 319 \\ & \text { (p. 365) } \end{aligned}$ | Information Ethics |  |
|  |  |  | $\begin{aligned} & \text { PHY } 206 \\ & \text { (p. 365) } \end{aligned}$ | Gen Physics I Mech | 3 |


| PHY 210L <br> (p. 365) | Gen Physics Lab I |
| :--- | :--- | ---: |
| PHY 232 |  |
| (p. 365) |  |$\quad$ Physics of Waves | REL 103 |
| :--- |
| (p. 365) |
| Electives Introduction to Religious and Theological Studies |
| Technical electives ${ }^{1}$ |


| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humani | ities Commons ${ }^{1}$ | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writi | ing Seminar ${ }^{3}$ | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communicatio |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variab |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable

Historical Studies

Diversity and Social Justice 3
Major Capstone 0-3

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Major Requirements

| CHM 123 | General Chemistry | 3 |
| :--- | :--- | :--- |
| CMM 100 | Principles of Oral Communication | 3 |
| CPS 150 | Algorithms \& Programming I | 4 |
| CPS 151 | Algorithms \& Programming II | 4 |


| CPS 346 | Operating Systems I | 3 |
| :---: | :---: | :---: |
| CPS 350 | Data Structures \& Algorithms | 3 |
| CPS 444 | Systems Programming I | 3 |
| ECE 101 | Introduction to Electrical \& Computer Engineering (2 semesters) | 0 |
| ECE 200 | Professional Development Seminar (2 semesters) | 0 |
| ECE 201L | Circuit Analysis Laboratory | 1 |
| ECE 203 | Introduction to MATLAB Programming | 1 |
| $\begin{aligned} & \text { ECE } 204 \\ & \& 204 \mathrm{~L} \end{aligned}$ | Electronic Devices and Electronic Devices Laboratory | 4 |
| ECE 215 <br> \& 215L | Introduction to Digital Systems and Digital Systems Laboratory | 4 |
| $\begin{aligned} & \text { ECE } 303 \\ & \& 303 L \end{aligned}$ | Signals \& Systems and Signals \& Systems Laboratory | 4 |
| $\begin{aligned} & \text { ECE } 304 \\ & \& 304 \mathrm{~L} \end{aligned}$ | Electronic Systems and Electronic Systems Laboratory | 4 |
| $\text { ECE } 314$ \& 314L | Fundamentals of Computer Architecture and Fundamentals of Computer Architecture Laboratory | 4 |
| ECE 334 | Discrete Signals \& Systems | 3 |
| ECE 340 | Engineering Probability \& Random Processes | 3 |
| ECE 431L | Multidisciplinary Design I | 1 |
| ECE 432L | Multidisciplinary Design II | 3 |
| ECE 433 | Project Management \& Innovation | 1 |
| ECE 444 | Advanced Digital Design | 3 |
| ECE 449 | Computer Systems Engineering | 3 |
| EGR 100 | Enrichment Workshop (2 semesters) | 0 |
| EGR 103 | Engineering Innovation | 2 |
| EGR 201 | Engineering Mechanics | 3 |
| EGR 202 | Engineering Thermodynamics | 3 |
| EGR 203 | Electrical \& Electronic Circuits | 3 |
| ENG 100 <br> \& ENG 200 | Writing Seminar I and Writing Seminar II | 6 |
| or ENG 200H | Writing Seminar II |  |
| HST 103 | The West \& the World | 3 |
| or HST 198 | History Scholars' Seminar |  |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 219 | Applied Differential Equations | 3 |
| MTH 310 | Linear Algebra \& Matrices | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHL 319 | Information Ethics | 3 |
| PHY 206 | General Physics I-Mechanics | 3 |
| PHY 210L | General Physics Laboratory | 1 |
| PHY 232 | The Physics of Waves | 3 |
| REL 103 | Introduction to Religioius \& Theological Studies | 3 |
| Computer Science elective |  | 3 |
| Electives |  | 12 |
| Technical electives ${ }^{1}$ |  | 6 |
| Total Hours |  | 137 |

1 Select from list approved by the Department of Electrical and Computer Engineering.

## CONCENTRATION IN Electrical Energy Systems (EES)

The Electrical Energy Systems Concentration will prepare our Electrical and Computer Engineering students in all aspects of Electrical Energy Systems including generation, transmission, distribution, utilization, storage, as well as enabling technologies for the smart grid.

Required ECE courses:

| ECE 316 | Introduction to Electrical Energy Systems |  |
| :--- | :--- | :--- |
| or ECE 499 | Special Problems in Electrical \& Computer <br> Engineering | 3 |
| ECE 414 | Electromechanical Devices |  |
| ECE 471 | Contemporary Power Systems \& the Smart Grid | 3 |
| Select one course from: | 3 |  |
| ECE 472 | Smart Grid Technologies | 3 |
| MEE 473 | Renewable Energy Systems |  |
| Total Hours |  | 12 |

## Concentration in Electro-Optics (eop)

The departments of Electrical \& Computer Engineering and Physics, with the support of the Electro-Optics Graduate Program at University of Dayton, offers an undergraduate concentration in Electro-Optics. This multidisciplinary concentration is open to Electrical Engineering, Computer Engineering and Physics undergraduates with appropriate prerequisite background. This concentration will enable students to pursue new coop opportunities and possible careers in photonics, and better prepare students to pursue new coop opportunities and possible careers in photonics and better prepare students who wish to pursue graduate degrees in the area of optics. All the courses listed below are approved as free technical electives for ECE undergraduate students.

| ECE 443 | Introduction to Electro-Optics | 3 |
| :--- | :--- | :--- |
| PHY 404 | Physical Optics | 3 |
| Select two courses from: | 6 |  |
| EOP 501 | Geometric Optics |  |
| EOP 502 | Optical Radiation \& Matter |  |
| EOP 505 | Introduction to Lasers |  |
| EOP 506/ECE | Electro-Optical Devices \& Systems |  |
| 573 |  |  |
| EOP 513/ECE |  |  |
| 572 |  |  |
| EOP 514ear Systems \& Fourier Optics |  |  |
| 574 |  |  |

Total Hours

## Concentration in Robotics (rob)

Robotics (CPE Majors) 15
ECE 415 Control Systems 3
ECE 416 Introduction to Industrial Robotic Manipulators 3
ECE 447 Digital Control Systems 3
Select two courses from: 6
CPS $480 \quad$ Artificial Intelligence

| ECE 414 | Electromechanical Devices |  |
| :---: | :---: | :---: |
| ECE 444 | Advanced Digital Design |  |
| ECE 445 | Signal Processing |  |
| MEE 321 | Theory of Machines |  |
| MEE 434 | Mechatronics |  |
| MEE 438 | Robotics \& Flexible Manufacturing |  |
| Robotics (ELE Majors) |  | 12 |
| ECE 416 | Introduction to Industrial Robotic Manipulators | 3 |
| ECE 447 | Digital Control Systems | 3 |
| Select two courses from: |  | 6 |
| CPS 480 | Artificial Intelligence |  |
| ECE 414 | Electromechanical Devices |  |
| ECE 444 | Advanced Digital Design |  |
| ECE 445 | Signal Processing |  |
| MEE 321 | Theory of Machines |  |
| MEE 434 | Mechatronics |  |
| MEE 438 | Robotics \& Flexible Manufacturing |  |

## Minor in Computer Systems (cos)

This minor is open to chemical, civil, and mechanical engineering majors, and other students with appropriate prerequisite background who receive permission from the ECE Department Chair. The program builds strength in the area of computer systems and digital design, with emphasis on computer hardware.
Computer Systems (non-MEE majors) ..... 16
CPS 150
(p. 365)
or ECE 444
Adv Digital Design
(p. 365)

ECE 201L Circuit Anlys Lab
1
(p. 365)

ECE 215 Introduction to Digital Systems 4
(p. 365)
\& 215L (p. 365)
ECE 314 Fund-Comptr Arch 4
(p. 365)
\& 314L (p. 365)
EGR 203 Electrcl \& Elctrnc Crt
(p. 365)

Computer Systems (MEE majors)15

CPS 150 Algorthm\&Progrm I (or equivalent) 4
(p. 365)

ECE 215 Introduction to Digital Systems 4
(p. 365)
\& 215L (p. 365)
ECE 314 Fund-Comptr Arch 4
(p. 365)
\& 314L (p. 365)
ECE 444
(p. 365)

## Minor in Signals and Systems (sas)

This minor is open to chemical, civil, and mechanical engineering majors, and other students with appropriate prerequisite background who receive permission from the ECE Department Chair. The program provides the
essential background in signals and systems theory including continuous and discrete systems. An advanced course is selected by the students to allow them to specialize in controls or signal processing.

| $\begin{aligned} & \text { ECE 201L } \\ & \text { (p. 365) } \end{aligned}$ | Circuit Anlys Lab | 1 |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { ECE } 203 \\ & \text { (p. 365) } \end{aligned}$ | Intro Matlab Prog | 1 |
| $\begin{aligned} & \text { ECE } 303 \\ & \text { (p. 365) } \\ & \text { \& 303L (p. 365) } \end{aligned}$ | Signals \& Sytems and Signals \& Systems Lab | 4 |
| $\begin{aligned} & \text { ECE } 334 \\ & \text { (p. 365) } \end{aligned}$ | Discrete Signals\&Sys | 3 |
| $\begin{aligned} & \text { ECE } 415 \\ & \text { (p. } 365 \text { ) } \end{aligned}$ | Control Systems | 3 |
| $\begin{aligned} & \text { or ECE } 445 \\ & \text { (p. 365) } \end{aligned}$ | Signal Processing |  |
| $\begin{aligned} & \text { EGR } 203 \\ & \text { (p. 365) } \end{aligned}$ | Electrcl \& Elctrnc Crt | 3 |
| Total Hours |  | 15 |

## Electrical Engineering

| First Year |  |
| :--- | :---: |
| Fall | Hours Spring |
| ECE 101 | 0 ECE 101 |
| PHY 206 (Satisfies CAP | 3 CHM 123 (Satisfies CAP |
| Natural Science) | Natural Science) |
| MTH 168 (Satisfies CAP | 4 CPS 150 |
| Math Requirement) |  |
| HST 103 (Satisfies CAP | 3 EGR 100 |
| First Year Humanities |  |
| Common) |  |
| PHL 103 (Satisfies CAP | 3 MTH 169 |
| First Year Humanities |  |
| Common) |  |
| ENG 100 (Satisfies CAP | 3 CMM 100 (Satisfies CAP |
| Writing Seminar) | Communication) |
| EGR 100 | 0 REL 103 (Satisfies CAP |
|  | First Year Humanities |
| EGR 103 | Common) |
|  | 2 |
| Second Year | 18 |
| Fall |  |
| ECE 200 | Hours Spring |
| PHY 210L | 0 ECE 200 |
|  | 1 PHY 232 (Satisfies CAP |
| ECE 203 | Crossing Boundaries |
| EGR 201 | Inquiry) |
| MTH 218 | 1 ECE 215 |
| EGR 203 | 3 ECE 215L |
| ECE 201L | 4 MTH 219 |
|  | 3 ECE 204 |
|  | 1 ECE 204L |
|  |  |


| ENG 200 (Satisfies CAP Second Year Writing Seminar) | 3 EGR 202 | 3 |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |
|  | 16 | 17 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| ECE 332 | 3 ECE 333 | 3 |
| ECE 314 | 3 ECE 340 | 3 |
| ECE 314L | 1 ECE 334 | 3 |
| MTH 310 | 3 ECE 304 | 3 |
| ECE 303 | 3 ECE 304L | 1 |
| ECE 303L | 1 Social Science (Satisfies CAP Social Science) | 3 |
| Art Study (Satisfies CAP Art | 3 |  |
| Study) |  |  |
|  | 17 | 16 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| TECH Elective | 3 TECH Elective | 3 |
| TECH Elective | 3 TECH Elective | 3 |
| ECE 415 | 3 ECE 432L | 3 |
| ECE 431L | 1 ECE 433 | 1 |
| ECE 401 | 3 Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice) | 3 |
| ECE 401L | 1 Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action) | 3 |
| Advanced HST (Satisfies CAP Crossing Boundaries) | 3 |  |
|  |  |  |
|  | 17 | 16 |
| Total credit hours: 134 |  |  |
| Computer Engineering |  |  |
| First Year |  |  |
| Fall | Hours Spring | Hours |
| ECE 101 | 0 CMM 100 (Satisfies CAP Communication) | 3 |
| ENG 100 (Satisfies CAP Writing Seminar) | 3 CPS 150 | 4 |
| HST 103 (Satisfies CAP First Year Humanities Common) | 3 REL 103 (Satisfies CAP First Year Humanities Common) | 3 |
| PHL 103 (Satisfies CAP <br> First Year Humanities Common) | 3 ECE 101 | 0 |
| MTH 168 (Satisfies CAP Math Requirement) | 4 MTH 169 | 4 |
| EGR 103 | 2 CHM 123 (Satisfies CAP Natural Science) | 3 |
| EGR 100 | 0 EGR 100 | 0 |


| PHY 206 (Satisfies CAP Natural Science) | 3 |  |
| :---: | :---: | :---: |
|  | 18 | 17 |
| Second Year |  |  |
| Fall | Hours Spring | Hours |
| ENG 200 (Satisfies CAP | 3 EGR 201 |  |
| Second Year Writing |  |  |
| Seminar) |  |  |
| CPS 151 | 4 CPS 350 |  |
| PHY 210 L | 1 ECE 215 |  |
| ECE 200 | 0 ECE 215L |  |
| MTH 218 | 4 MTH 219 |  |
| EGR 203 | 3 ECE 204 |  |
| ECE 201L | 1 ECE 204L |  |
| ECE 203 | 1 ECE 200 |  |
|  | 17 | 17 |
| Third Year |  |  |
| Fall | Hours Spring | Hours |
| Art Study (Satisfies CAP Art Study) | 3 Social Science (Satisfies CAP Social Science) |  |
| CPS 346 | 3 EGR 202 |  |
| ECE 314 | 3 ECE 340 |  |
| ECE 314L | 1 PHY 232 (Satisfies CAP Crossing Boundaries Inquiry) |  |
| MTH 310 | 3 Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action) |  |
| ECE 303 | 3 ECE 334 |  |
| ECE 303L | 1 |  |
|  | 17 | 18 |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| ECE 444 | 3 ECE 449 |  |
| CPS 444 | 3 CPS Elect |  |
| TECH Elect | 3 TECH Elect |  |
| ECE 431L | 1 ECE 432L (Satisfies CAP Capatone Requirement) |  |
| ECE 304 | 3 ECE 433 |  |
| ECE 304L | 1 Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice) |  |
| ADV HST (Satisfies CAP | 3 |  |
| Crossing Boundaries |  |  |
| Advanced History |  |  |
| Integrative) |  |  |

Total credit hours: 137

## Hours

## Courses

## ECE 101. Introduction to Electrical \& Computer Engineering. 0 Hours

Introduction to electrical and computer engineering faculty, facilities, and curriculum. Career opportunities in electrical and computer engineering and areas of specialization are discussed.

ECE 198. Multidisciplinary Research \& Innovation Laboratory. 1-6 Hours
Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## ECE 200. Professional Development Seminar. 0 Hours

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

## ECE 201L. Circuit Analysis Laboratory. 1 Hour

Laboratory course stressing experimental techniques, laboratory reporting, safety, and instrumentation. Experimental investigation of basic steady-state and transient circuits. Corequisite(s): ECE 201 or EGR 203.

## ECE 203. Introduction to MATLAB Programming. 1 Hour

MATLAB system and development environment, vector and matrix operations using MATLAB, linear algebra and calculus using MATLAB, MATLAB graphics, flow control, symbolic math toolbox. Prerequisite(s): (CPS 132 or CPS 150) or equivalent.

## ECE 204. Electronic Devices. 3 Hours

Study of the terminal characteristics of electronic devices and basic single stage amplifier configurations using bipolar junction transistors and fieldeffect transistors. Analysis of the devices includes a qualitative physical description, volt-ampere curves, and the development of small- and largesignal equivalent circuit models. Prerequisite(s): EGR 203. Corequisite(s): ECE 204L.

## ECE 204L. Electronic Devices Laboratory. 1 Hour

Laboratory investigation of electronic devices: diodes, bipolar junction transistors, field-effect transistors and operational amplifiers. Corequisite(s): ECE 204.

## ECE 215. Introduction to Digital Systems. 3 Hours

Introduction to binary systems, logic circuits, Boolean algebra, simplification methods, combinational circuits and networks, programmable logic devices, flip flops, registers, counters, memory elements, and analysis and design of sequential circuits. Prerequisite(s): EGR 203. Corequisite(s): ECE 215L.

## ECE 215L. Digital Systems Laboratory. 1 Hour

Laboratory investigation of digital logic circuits and systems covered in ECE 215. Logic gate characteristics; combinational logic design and analysis; latches and flip-flops; synchronous and asynchronous sequential logic; simple digital systems. Experiments include design and analysis of digital systems using breadboarding, FPGA boards, modeling and simulation tools, hardware description languages, and logic synthesis tools. Prerequisite(s): ECE 201, ECE 201L. Corequisite(s): ECE 215.

## ECE 298. Multidisciplinary Research \& Innovation Laboratory. 1-6

 HoursStudents participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## ECE 303. Signals \& Systems. 3 Hours

Mathematical framework associated with the analysis of linear systems including signal representation by orthogonal functions, convolution, Fourier and Laplace analysis, and frequency response of circuits and systems. Prerequisite(s): ECE 204; MTH 218. Corequisite(s): ECE 303L.

## ECE 303L. Signals \& Systems Laboratory. 1 Hour

Laboratory investigation of signals and systems including signal decomposition, system impulse response, convolution, frequency analysis of systems, and filter design and realization. Prerequisite(s): ECE 204. Corequisite(s): ECE 303.

## ECE 304. Electronic Systems. 3 Hours

ELECTRONIC SYSTEMS Study of cascaded amplifiers, feedback amplifiers, linear integrated circuits, and oscillators including steady state analysis and analysis of frequency response. Prerequisite(s): ECE 303. Corequisite(s): ECE 304L.

## ECE 304L. Electronic Systems Laboratory. 1 Hour

Design, construction and verification of multistage amplifiers, differential amplifiers, feedback amplifiers, passive and active filters, and oscillators. Prerequisite(s): ECE 303. Corequisite(s): ECE 304.
ECE 314. Fundamentals of Computer Architecture. 3 Hours
Study of computer systems organization, representation of data and instructions, instruction set architecture, processor and control units, memory devices and hierarchy, I/O devices and interfacing peripherals, high- to low-level language mapping, system simulation and implementation, applications and practical problems. Prerequisite(s): CPS 150; ECE 215. Corequisite(s): ECE 314L.

## ECE 314L. Fundamentals of Computer Architecture Laboratory. 1

## Hour

Laboratory investigation of digital computer architecture covered in ECE 314. Computer sub-systems such as central processing units, control units, I/O units, and hardware/software interfaces will be experimentally considered. Simulation and implementation will be used to study applications and practical problems. Prerequisite(s): ECE 215. Corequisite(s): ECE 314.

## ECE 316. Introduction to Electrical Energy Systems. 3 Hours

A broad introduction to electric energy concepts. Generation, transmission, distribution, and utilization of electric energy. Renewable energy, three phase systems, transformers, power electronics, motors and generators. Contemporary topics. Prerequisite(s): EGR 203 or equivalent.

## ECE 332. Electromagnetics. 3 Hours

Study of vector calculus, electro- and magneto-statics, Maxwell's equations, and electromagnetic plane waves and their reflection and transmission from discontinuities. Prerequisite(s): PHY 232.

## ECE 333. Applied Electromagnetics. 3 Hours

Electromagnetic theory applied to problems in the areas of waveguides, radiation, electro-optics and electromagnetic interference and electromagnetic compatibility. Prerequisite(s): ECE 332.

ECE 334. Discrete Signals \& Systems. 3 Hours
Introduction to discrete signals and systems including sampling and reconstruction of continuous signals, digital filters, frequency analysis, the z-transform, and the discrete Fourier transform. Prerequisite(s): ECE 303.
ECE 340. Engineering Probability \& Random Processes. 3 Hours
Axiomatic probability, derived probability relationships, conditional probability, statistical independence, total probability and Bayes' Theorem, counting techniques, common random variables and their distribution functions, transformations of random variables, moments, autocorrelation, power spectral density, cross correlation and covariance, random processes through linear and nonlinear systems, linear regression, and engineering decision strategies. Prerequisite(s): ECE 303; MTH 218.

## ECE 398. Multidisciplinary Research \& Innovation Laboratory. 1-6

 HoursStudents participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## ECE 401. Communication Systems. 3 Hours

Study of amplitude, angle, pulse, and digital communication systems including generation, detection, and analysis of modulated signals and power, bandwidth, and noise considerations. Prerequisite(s): ECE 304, 340. Corequisite(s): ECE 401L.

## ECE 401L. Communication Systems Laboratory. 1 Hour

Design, fabrication, and laboratory investigation of modulators, detectors, filters, and associated communication components and systems. Prerequisite(s): ECE 304. Corequisite(s): ECE 401.

## ECE 414. Electromechanical Devices. 3 Hours

Properties and theory of electromechanical devices: nonlinear electromagnetic actuators; rotating machine analysis; field and circuit concepts and direct current, synchronous, and induction machines: specialpurpose machines and fractional horsepower machines. Prerequisite(s): ECE 316 or equivalent.

## ECE 415. Control Systems. 3 Hours

Study of mathematical models for control systems and analysis of performance characteristics and stability. Design topics include poleplacement, root locus, and frequency domain techniques. Prerequisite(s): ECE 303.

ECE 416. Introduction to Industrial Robotic Manipulators. 3 Hours Topics include homogeneous transformations, direct and inverse kinematics, trajectory generation, and selected topics of robot vision. Prerequisite(s): ECE 303.

## ECE 431L. Multidisciplinary Design I. 1 Hour

Multidisciplinary engineering design projects and problems. Introduction to product development using the Product Realization Process.
Concentration on proposals, specifications, conceptualization and decision analysis. Projects result in final design and prototyping in the follow-on course. Prerequisite(s): ECE 304, ECE 314.

## ECE 432L. Multidisciplinary Design II. 3 Hours

Combination of lecture and laboratory experiences. The focus of the lecture is on project management aspects of engineering design, including communication, collaboration, project tracking methods, cost estimating, overhead, direct labor costs, time value of money, depreciation, and return on investment. The focus of the lab is on a multidisciplinary team design project. Detailed evaluation of the Product Realization Process (PRP), including specifications, innovation, conceptualization, decision analysis, embodiment design, final design and prototyping. Analysis of the design criteria for safety, ergonomic, environmental, financial, ethical, and socio-political impact. Periodic oral and status reports. Culminates in a comprehensive written report and oral presentation. Prerequisite(s): CPE majors: ECE 340, ECE 431L, ECE 444; ELE majors: ECE 340, ECE 431L, (ECE 401 or ECE 415).

## ECE 433. Project Management \& Innovation. 1 Hour

Introduces students and teams to project management, entrepreneurship, and innovation. Topics include project management,cost estimating, time value of money, patent law, marketing, finance, and business plan development. Prerequisite(s): Junior status.

## ECE 440. Physical Electronics. 3 Hours

Introduction to wave mechanics, electron ballistics, theory of metals and semiconductors, electron emission, space charge flow, and modern electron devices. Prerequisite(s): MTH 219; PHY 232.

ECE 441. Integrated Circuit Electronics. 3 Hours
Integrated circuit design, construction and verification including the study of biasing, multistage differential and analog power amplification, and computer assisted design tools for "on-chip" design and layout. Prerequisite(s): ECE 304.

## ECE 442. Engineering Electromagnetics. 3 Hours

Processing Maxwell's equations and applying the predictions to the analysis and design of engineering systems that make use of electromagnetic energy from ELF through optical frequencies. Topics include propagation, radiation, interactions with matter, guided waves, and antenna fundamentals. Prerequisite(s): ECE 333.

## ECE 443. Introduction to Electro-Optics. 3 Hours

Introductory overview of electro-optics starting with Maxwell's equations and leading to lasers, holography, and other timely applications. Prerequisite(s): ECE 332.

## ECE 444. Advanced Digital Design. 3 Hours

Systems approach to digital design including: structured top-down development process using simple and complex logic modules from various logic families; practical aspects of the design, construction, and verification of digital subsystems; application of microcomputer and/or controller as a flexible logic device; real-time embedded systems design; and the use of HDL tools and simulation. Prerequisite(s): ECE 314.

## ECE 445. Signal Processing. 3 Hours

Study of signal conditioning, digital signal processing, and data processing. Topics include transducers, high gain amplifier design, digital filtering, and spectrum estimation. Specialized application determined by instructor. Prerequisite(s): ECE 334.

## ECE 446. Microelectronic Systems Design. 3 Hours

Basic integrated circuit design concepts, system layout, application of design methodology, the fabrication process, manufacturing limitations of the design process, and CAD/CAE utilization to realize the design process. Prerequisite(s): ECE 304.

ECE 447. Digital Control Systems. 3 Hours
Analysis and synthesis of feedback control systems including digital compensators. Topics include performance and stability analysis, regulator and servomechanism design using time and frequency domain methods, and digital implementation case studies. Prerequisite(s): ECE 415; ECE 334 or equivalent.

## ECE 448. Fiber Optic Communications. 3 Hours

General light guidance principles; ray optics; dispersion; single mode, multimode, and graded index fibers; basic laser and LED source principles; photodetectors; error probability in digital optical systems; rise time analysis; loss budget analysis; local area networks and long haul communication links. Prerequisite(s): ECE 333 Corequisite(s): ECE 401.

ECE 449. Computer Systems Engineering. 3 Hours
An introduction to advanced computer architecture and computer systems design. Topics include: exploration of principle architecture features of modern computers, pipelining, memory hierarchy, I/O devices, interconnection networks, introduction to parallel and multiprocessor systems, and the use of hardware description languages (HDLs) in system implementation. Prerequisite(s): ECE 444; (CPS 346 or permission of instructor).

## ECE 450L. Projects Laboratory. 1-3 Hours

Project-oriented laboratory applying engineering skills in the design, development, and demonstration of electrical and electronic systems. Prerequisite(s): Permission of project advisor.
ECE 471. Contemporary Power Systems \& the Smart Grid. 3 Hours Introduction to electrical power systems; generation, transmission and utilization; power system analysis; power system control; energy management; and an introduction to smart grid technologies. Prerequisites(s): ECE 316 or equivalent.

## ECE 472. Smart Grid Technologies. 3 Hours

An introductory study of enabling technologies and energy issues necessary for full realizaton of the Smart Grid. Course topics vary. This course can be taken multiple times. Prerequisite(s): ECE 471 or equivalent.

## ECE 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## ECE 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): ECE 493.

## ECE 498. Multidisciplinary Research \& Innovation Laboratory. 1-6

 HoursStudents participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## ECE 499. Special Problems in Electrical \& Computer Engineering. 1-6 Hours

Particular assignments to be arranged and approved by the department chairperson.

## Engineering Management

Minors:

- Engineering Management (p. 374)
- Operations Engineering (p. 374)


## Minor in Engineering Management (enm)

This twelve credit hour minor is open to all engineering and engineering technology majors. Completion of this minor will provide the student with understanding of basic concepts relevant to the management of engineering operations. Students who anticipate moving from technical to managerial positions during their careers may wish to consider this minor.

| ENM 505 | Mgt of Engr Systms | 3 |
| :--- | :--- | ---: |
| (p. 374) |  |  |
| ENM 530 | Engineering Economy |  |
| (p. 374) |  |  |
| or ISE 430 | Engineering Economy |  |
| (p. 374) |  | 6 |
| Select two courses from: |  |  |


| ENM 500 |  |
| :--- | :--- |
| (p. 374) | Prob\&Stat for Engrs |
| ENM 515 |  |
| (p. 374) | Human Factors Engr |
| ENM 534 | Decision Making |
| (p. 374) |  |
| ENM 539 | Sys Engr/Prjct Mgmt |
| (p. 374) |  |
| ENM 560 | Quality Assurance |
| (p. 374) |  |
| ENM 565 | Reliability Engr I |
| (p. 374) |  |
| ENM 582 | Engr Organizatnl Dev |
| (p. 374) |  |
| ISE 300 | Prob \& Stat Egrs |
| (p. 374) |  |
| ISE 421 | Intro to OPS Rsrch ${ }^{1}$ |
| (p. 374) | System Dynamics |
| ISE 455 |  |
| (p. 374) |  |
| ISE 460 | Quality Assurance |
| (p. 374) |  |
| ISE 465 | Reliablty\&Maintnblty |
| (p. 374) |  |
| MSC 521 | Intro to OPS Rsrch |
| (p. 374) |  |
| MSC 555 | System Dynamics I |
| (p. 374) |  |
| MSC 572 | System Simulation |
| (p. 374) |  |
| Total Hours |  |

## Minor in Operations Engineering (ope)

This twelve hour minor is open to all engineering and engineering technology majors. Completion of this minor will provide the student with a strong foundation in the analytical tools needed to plan, design, optimize, and manage complex engineering operations. Students who anticipate moving into problem-solving and decision-support roles during their engineering careers may wish to consider this minor.

| $\begin{aligned} & \text { ENM } 500 \\ & (\text { p. } 374) \end{aligned}$ | Prob\&Stat for Engrs | 3 |
| :---: | :---: | :---: |
| or ISE 300 <br> (p. 374) | Prob \& Stat Egrs |  |
| $\begin{aligned} & \text { ISE } 421 \\ & (\text { p. } 374) \end{aligned}$ | Intro to OPS Rsrch ${ }^{1}$ | 3 |
| $\begin{aligned} & \text { or MSC } 521 \\ & \text { (p. 374) } \end{aligned}$ | Intro to OPS Rsrch |  |
| MTH 367 <br> (p. 374) | Statistical Meth I | 3 |
| Select one cour | from: | 3 |

ENM 560 Quality Assurance ${ }^{2}$
(p. 374)

ENM 561 Dsgn \& Analy Expr
(p. 374)

ENM 565 Reliability Engr I
(p. 374)

ISE 460 Quality Assurance
(p. 374)

MSC 572 System Simulation
(p. 374)

Total Hours
12

1 ENM 500 (p. 374) (or ISE 300 (p. 374) or MTH 367 (p. 374)) is a corequisite.
2 ENM 500 (p. 374) (or ISE 300 (p. 374) or MTH 367 (p. 374)) is a prerequisite.

## Engineering Technology

## Majors:

- Bachelor of Science, Electronic and Computer Engineering Technology (p. 375)
- Bachelor of Science, Industrial Engineering Technology (p. 376)
- Bachelor of Science, Global Manufacturing Systems Engineering Technology (p. 378)
- Bachelor of Science, Mechanical Engineering Technology (p. 380)

Minors:

- Automotive Systems (p. 381)
- Electronic and Computer Engineering Technology (p. 376)
- Engineering Technology (p. 381)
- Global Manufacturing Systems Engineering Technology (p. 379)
- Industrial Automation and Applied Robotic Systems (p. 382)
- Industrial Engineering Technology (p. 377)
- Integrated Arts and Technology (p. 382)
- Mechanical Engineering Technology (p. 381)
- Quality Assurance (p. 378)
- Sustainable Manufacturing (p. 383)

The School of Engineering also offers a Bachelor of Science in Engineering Technology. The programs in which the degree is offered are electronic and computer engineering technology, global manufacturing systems engineering technology, industrial engineering technology, and mechanical engineering technology. The engineering technologist is usually involved in the design, performance evaluation, service and sales of products, equipment, and manufacturing systems or the management of these activities. The management of process operations and plant facilities are also important career paths.

The engineering technology programs provide: (1) specialized technical courses that emphasize rational thinking and the application of engineering and scientific principles to the practical solution of technological problems; (2) courses in applied mathematics and science sufficient to support the technical courses and to prepare the student for future growth; and (3) education to prepare students to communicate intelligently and to take places in society as responsible, humane, complete professionals.

The University of Dayton engineering technology programs prepare graduates who:

- are competent and productive in the practice of both the technical and communication aspects of their profession;
- demonstrate ethical and professional standards of conduct
- exhibit leadership qualities as appropriate for the practice of their profession;
- are involved in service activities that benefit their profession and their community; and
- are engaged in continuing professional development.


## Electronic and Computer Engineering Technology

The Electronic and Computer Engineering Technology Program (ECT) prepares students for careers in the electronics and computer fields. The ECT curriculum, while including a strong emphasis on computers, centers on applied engineering topics in circuit analysis, analog and digital electronic design, digital communications, digital circuits, microprocessors, software and data acquisition instrumentation. The graduate is prepared to work in industry at a variety of tasks including analog and digital design, microprocessor hardware and software applications, electronic controls, automation, engineering sales and support, product design and development, and data communications. The curricula provide the strong foundation in the basic principles necessary to support any future career studies or development as dictated by changing technology or career roles.

## Faculty

Scott Schneider, Chairperson of Department of Engineering Technology Professors Emeriti: Farren, Hanneman, Hazen
Professor: Segalewitz
Associate Professors: Globig, Schneider

## Bachelor of Science with a major in Electronic and Computer Engineering Technology (ECT) minimum of 131 credit hours

| Common Academic Program (CAP) |  |  |
| :---: | :---: | :---: |
| *credit hours will vary depending on courses selected |  |  |
| First-Year Humani | nities Commons ${ }^{1}$ | 12 |
| HST 103 | The West \& the World |  |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variable credit |
| Faith Traditions |  |  |
| Practical Ethical Action |  |  |
| Inquiry |  |  |
| Integrative |  |  |
| Advanced Study |  | variable credit |
| Philosophy and/or Religious Studies |  |  |
| Historical Studies |  |  |
| Diversity and Social Justice |  | 3 |
| Major Capstone |  | 0-3 |
| 1 Completed with ASI 110 and ASI 120. |  |  |
| 2 Or ENG 100A and ENG 100B, or ENG 200 H , by placement. |  |  |
| 3 Completed with ENG 200 H or ASI 120. |  |  |
| Major Requirements |  |  |
| CHM 123 <br> \& 123L | General Chemistry and General Chemistry Laboratory | 4 |
| CMM 100 | Principles of Oral Communication | 3 |
| ECT 110 | Electical Circuits I | 3 |
| ECT 110L | Electical Circuits I Laboratory | 1 |
| ECT 120 | Electical Circuits II | 3 |
| ECT 206 <br> \& 206L | Electron Devices I and Electron Devices I Laboratory | 4 |
| $\begin{aligned} & \text { ECT } 224 \\ & \& 224 \mathrm{~L} \end{aligned}$ | Digital Computer Fundamentals and Digital Computer Fundamentals Laboratory | 4 |
| ECT 306 \& 306L | Electronic Devices II and Electronic Devices II Laboratory | 4 |
| ECT 357 | Microprocessors I | 3 |
| ECT 358 <br> \& 358L | Microprocessors II and Microprocessors II Laboratory | 4 |



Total Hours131

1 The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200, or ENG 200 H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200 H do not receive credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition.
2 Select from list approved by the Department of Engineering Technology.

## Minor in Electronic and Computer Engineering Technology (ECT)

This minor provides a concentration in the electronic and computer field that will compliment the student's major program of study. It is open to all
engineering technology majors except electronic or computer engineering technology. It is also available for other majors within the University if certain prerequisites have been met.

| ECT 120 | Electical Circuits II |
| :---: | :---: |
| $\begin{aligned} & \text { ECT } 224 \\ & \& 224 \mathrm{~L} \end{aligned}$ | Digital Computer Fundamentals and Digital Computer Fundamentals Laboratory |
| Select one emphasis from: ${ }^{1,2}$ |  |
| Analog Devices Emphasis |  |
| ECT 206 \& 206L | Electron Devices I and Electron Devices I Laboratory |
| ECT 306 <br> \& 306L | Electronic Devices II and Electronic Devices II Laboratory |
| Microprocessor Emphasis |  |
| ECT 357 | Microprocessors I |
| $\begin{aligned} & \text { ECT } 358 \\ & \& 358 \mathrm{~L} \end{aligned}$ | Microprocessors II and Microprocessors II Laboratory |
| Software Emphasis |  |
| ECT 361 | Programming Structures |
| ECT 362 | Concepts \& Applications of Computer Operating Systems |

Total Hours
1 Courses cannot be already required for student's major.
2 Accompanying laboratories are recommended but not required.

## Industrial Engineering Technology

The Industrial Engineering Technology Program has as its objective providing specialized education to prepare students for management and technical staff positions in manufacturing and service organizations such as health care, banking, transportation, food service, and government. Graduates may be involved in the economic selection and location of equipment, the planning of work methods and expected output, quality assurance, facilities layout, and scheduling and controlling the flow of materials. The curriculum emphasizes courses in work measurement, planning and control of lean processes, human factors, safety, facilities layout design and simulation, economic and financial analysis, statistical process control, management of projects and global technical organizations, cost estimating and cost control, and mathematical decision-making.

## Faculty

Scott Schneider, Interim Chairperson of the Department of Engineering Technology
Charlie Edmonson, Program Coordinator
Professors: Edmonson, Summers, Untener
Associate Professors: Blust, Falkowski, Globig
Adjunct Professor: R. Reynolds

## Bachelor of Science with a major in Industrial Engineering Technology (let) minimum of 131 credit hours

Common Academic Program (CAP)<br>*credit hours will vary depending on courses selected

First-Year Humanities Commons ${ }^{1}$


## Major Requirements

| CHM 123 | General Chemistry | 4 |
| :--- | :--- | :--- |
| \& 123L | and General Chemistry Laboratory |  |
| CMM 100 | Principles of Oral Communication | 3 |
| ECT 110 | Electical Circuits I | 4 |
| \& 110L | and Electical Circuits I Laboratory |  |
| EGR 103 | Engineering Innovation | 2 |
| ENG 100 | Writing Seminar I | 6 |
| \& ENG 200 | and Writing Seminar II 1 |  |
| or ENG 200H | Writing Seminar II | 3 |
| HST 103 | The West \& the World | 3 |
| or HST 198 | History Scholars' Seminar | 3 |
| IET 230 | Work Measurement | 3 |
| IET 316 | Quantitative Analysis | 3 |
| IET 317 | Industrial Economic \& Financial Analysis | 3 |
| IET 318 | Statistical Process Control | 3 |
| IET 323 | Project Management | 3 |
| IET 332 | Facilities Layout Design | 3 |
| IET 408 | Lean Management Methods | 3 |
| IET 415 | Management of Global Technical Organizations | 3 |
| IET 418 | Cost Estimating \& Control | 3 |
| IET 420 | Industrial \& Environmental Safety | 3 |
| IET 435 | Human Factors | 3 |
| IET 490 | Senior Project | 3 |
| MCT 110L | Technical Drawing \& CAD Laboratory | 3 |


| MCT 111L | Introduction to Design Laboratory | 2 |
| :--- | :--- | ---: |
| MCT 220 | Statics \& Dynamics | 3 |
| MCT 313 | Industrial Mechanisms | 3 |
| MFG 108L | Manufacturing Processes Laboratory | 1 |
| MFG 204 | Materials \& Processes | 4 |
| \& 204L | and Materials \& Processes Laboratory |  |
| MFG 206L | Dimensional Metrology Laboratory | 1 |
| MFG 208L | Geometric Dimensioning \& Tolerancing Laboratory | 1 |
| MFG 438 | Sustainable Manufacturing \& Product Design | 3 |
| MTH 137 | Calculus I with Review | 4 |
| MTH 138 | Calculus I with Review | 4 |
| MTH 207 | Introduction to Statistics | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 201 | General Physics | 4 |
| \& 201L | and General Physics Laboratory |  |
| REL 103 | Introduction to Religioius \& Theological Studies | 3 |
| SET 100 | Engineering Technology First Year Seminar (2 | 0 |
| SET 101 | semesters) | 0 |
| SET 153L | Enrichment Workshop (2 semesters) | 131 |
| SET 200 | Technical Computation Laboratory | 15 |
| SET 499 | Professional Development Seminar (2 semesters) | 0 |
| Electives | Seminar | 1 |
| Technical electives | 15 |  |
| Total Hours |  | 15 |

1 The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200, or ENG 200 H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200H do not receive credits for ENG 100 but are free to take elective course work in place of the waived first semester of composition.
2 Select from list approved by the Department of Engineering Technology.

## Minor in Industrial Engineering Technology (iet)

This minor is open to all majors except industrial engineering technology. The program provides a concentration in the industrial field that will complement the student's major field of study. All prerequisites and corequisites must be followed.
Choose four courses from: ${ }^{1}$

| IET 230 | Work Measurement |
| :--- | :--- |
| (p. 374) |  |
| IET 317 | Industrl Econ\&Analys |
| (p. 374) |  |
| IET 318 | Statistcl Proc Contr |
| (p. 374) |  |
| IET 319 | Quality Improv Mthds |
| (p. 374) |  |


| $\begin{aligned} & \text { IET } 320 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Qualty Assur Technqs |  |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { IET } 321 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Quality Management |  |
| $\begin{aligned} & \text { IET } 332 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Facilities Layout Ds |  |
| $\begin{aligned} & \text { IET } 408 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Lean Mgt Methods |  |
| $\begin{aligned} & \text { IET } 415 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Mgt of Glbal Tch Org |  |
| $\begin{aligned} & \text { IET } 418 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Cost Estmtng\&Control |  |
| $\begin{aligned} & \text { IET } 420 \\ & \text { (p. 374) } \end{aligned}$ | Indstrl\&Environ Sfty |  |
| $\begin{aligned} & \text { IET } 435 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Human Factors |  |
| IET - Human Performance Emphasis ${ }^{2}$ |  | 12 |
| $\begin{aligned} & \text { IET } 230 \\ & \text { (p. 374) } \end{aligned}$ | Work Measurement |  |
| $\begin{aligned} & \text { IET } 415 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Mgt of Glbal Tch Org |  |
| $\begin{aligned} & \text { IET } 420 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Indstrl\&Environ Sfty |  |
| $\begin{aligned} & \text { IET } 435 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Human Factors |  |
| IET - Production | Management Emphasis ${ }^{3}$ | 18 |
| $\begin{aligned} & \text { IET } 230 \\ & \text { (p. 374) } \end{aligned}$ | Work Measurement |  |
| $\begin{aligned} & \text { IET } 318 \\ & \text { (p. 374) } \end{aligned}$ | Statistcl Proc Contr |  |
| $\begin{aligned} & \text { IET } 332 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Facilities Layout Ds |  |
| $\begin{aligned} & \text { IET } 408 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Lean Mgt Methods |  |
| $\begin{aligned} & \text { IET } 418 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Cost Estmtng\&Control |  |
| $\begin{aligned} & \text { IET } 420 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Indstrı\&Environ Sfty |  |
| IET - Cost Management Emphasis ${ }^{4}$ |  | 12 |
| $\begin{aligned} & \text { IET } 317 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Industrl Econ\&Analys |  |
| $\begin{aligned} & \text { IET } 408 \\ & \text { (p. 374) } \end{aligned}$ | Lean Mgt Methods |  |
| $\begin{aligned} & \text { IET } 415 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Mgt of Glbal Tch Org |  |
| $\begin{aligned} & \text { IET } 418 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Cost Estmtng\&Control |  |

## Minor in Quality Assurance (qua)

This minor is open to all majors. The program provides a concentration in the field of quality control, quality assurance, and quality management. Upon successful completion of this minor, the student will have command of statistical quality tools as well as the breadth of quality management concepts and experience in practical application of the tools. All prerequisites and corequisites must be followed.

| IET 318 | Statistical Process Control | 3 |
| :--- | :--- | ---: |
| IET 319 | Quality Improvement Methods | 3 |
| IET 320 | Quality Assurance Techniques | 3 |
| IET 321 | Quality Management | 3 |
| Total Hours |  | 12 |

## Global Manufacturing Systems Engineering Technology

Today's global economy has increasingly become borderless and is dominated by multi-national companies. This requires tomorrow's engineers to be able to work efficiently in multicultural teams. The Global Manufacturing Systems Engineering Technology program is creating a new type of "global engineer" both answering industry's demand and giving the upcoming engineer a competitive advantage in today's market place.

In the Global Manufacturing Systems Engineering Technology program you will use state-of-the-art technology to plan, design, and implement the tools and machines needed to produce high quality products at competitive prices. Throughout the program you will also apply important concepts of the lean enterprise, global competitiveness, green engineering concepts, and customer satisfaction.

The curriculum is highly interdisciplinary since the manufacturing professional must possess extensive technical skills and excellent humanistic skills in communications, computers, teamwork, information technology, globalism and multiculturalism. The technical courses emphasize engineering materials and manufacturing processes; mechanical, hydraulic, and pneumatic automation and electronic controls; computer integrated manufacturing; manufacturing planning and control; extensive laboratory experiences; the technical sciences and applied mathematics from college algebra, probability, statistics, calculus, and linear programming. The curriculum contains strong components from the humanities, social sciences, and communications, plus foreign language and multicultural requirements. The technical electives allow the student versatility in developing technical breadth or depth. The program is designed to prepare the graduates for challenging careers in manufacturing and serves as an excellent foundation for a variety of advanced degree options.

## Faculty

Scott Schneider, Interim Chairperson of the Department of Engineering Technology
Robert L. Wolff, Program Coordinator
Professor Emeritus: Simon
Professors: Summers, Untener, Wolff
Associate Professors: Blust, Falkowski
Assistant Professor: Kozak
Adjunct Professor: Wendeln

## Bachelor of Science with a major in Global Manufacturing Systems Engineering Technology (gmt) minimum of 133 credit hours

Common Academic Program (CAP)

*credit hours will vary depending on courses selected

## First-Year Humanities Commons ${ }^{1}$



| $\begin{aligned} & \text { MFG } 204 \\ & \& 204 L \end{aligned}$ | Materials \& Processes and Materials \& Processes Laboratory |
| :---: | :---: |
| MFG 206L | Dimensional Metrology Laboratory |
| MFG 208L | Geometric Dimensioning \& Tolerancing Laboratory |
| MFG 240 | Manufacturing \& Product Design |
| MFG 427 | Computer Integrated Manufacturing \& Global Manufacturing |
| MFG 431 | Controls for Industrial Automation 3 |
| MFG 432 | Plastics, Composites \& Nano Materials \& Processes |
| MFG 434 | Robotics \& Computer Numerical Control |
| MFG 438 | Sustainable Manufacturing \& Product Design |
| MFG 490 | Senior Project 3 |
| MTH 137 | Calculus I with Review 4 |
| MTH 138 | Calculus I with Review 4 |
| MTH 207 | Introduction to Statistics 3 |
| PHL 103 | Introduction to Philosophy 3 |
| $\begin{aligned} & \text { PHY } 201 \\ & \text { le \& 201L } \end{aligned}$ | General Physics and General Physics Laboratory |
| REL 103 | Introduction to Religioius \& Theological Studies 3 |
| SET 100 | Engineering Technology First Year Seminar (2 semesters) |
| SET 101 | Enrichment Workshop (2 semesters) 0 |
| SET 153L | Technical Computation Laboratory |
| SET 200 | Professional Development Seminar (2 semesters) 0 |
| SET 499 | Seminar |
| Electives | 15 |
| Language r | ments ${ }^{2} 8$ |
| Technical ele | 3 |
| Total Hours | 133 |
| 1 The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200 or ENG 200 H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. <br> ENG 200 H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200 H do not receive credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition. |  |
| 2 Students who have no or limited experience in a foreign language will be required to complete a two-course language sequence either LNG 101/LNG 141 (6 sem. hours) depending on their beginning proficiency. Students entering the University of Dayton and enrolled in the program will fulfill this requirement. Students passing the proficiency examination of one or both foreign language course requirements will be required to complete additional Technical electives to fulfill program credits requirements. |  |
| 3 Select from Technolo | t approved by the Department of Engineering |

## Minor in Global Manufacturing Systems Engineering Technology (gmt)

This minor is open to all engineering technology majors except manufacturing. The program provides a concentration in manufacturing
that will complement the student's major field of study. All prerequisites and corequisites must be followed.

| Select four courses from: ${ }^{1}$ | 12 |  |
| :--- | :--- | :--- |
| MFG 204 | Materials \& Processes |  |
| \& 204L | and Materials \& Processes Laboratory |  |
| MFG 240 | Manufacturing \& Product Design |  |

1 Courses selected may not be those already required for student's major.

## Mechanical Engineering Technology

The Mechanical Engineering Technology Program emphasizes the practical application of the principles of the mechanical field. Career opportunities are in mechanical design, computer-aided design, product evaluation and development, manufacturing engineering, computer-aided manufacturing, plant engineering, technical sales, technical service, fluid power, automation, and supervision. A significant portion of the graduates are in technical management. The curriculum includes a core of technical sciences; applied courses in design, thermodynamics, fluid mechanics, and manufacturing; extensive laboratory experiences; and mathematics from college algebra through probability, statistics, calculus, and differential equations. Courses are required in oral and written communication, with components in the humanities and social sciences to provide insight into the impact of technology on society. Concepts from basic education are stressed in technical courses. The curriculum is broad to prepare graduates for employment and provide a foundation on which to base continued study of changing technology.

## Faculty

Scott Schneider, Interim Chairperson of Department of Engineering
Technology
David H. Myszka, Program Coordinator
Professor Emeritus: Mott
Professors: Edmonson, Myszka, Untener, Wolff
Associate Professors: Blust, Falkowski
Assistant Professor: Kozak

## Bachelor of Science with a major in Mechanical Engineering Technology (mct) minimum of 132 credit hours

Common Academic Program (CAP)
*credit hours will vary depending on courses selected
First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |
| :--- | :--- |
| REL 103 | Introduction to Religioius \& Theological Studies |
| PHL 103 | Introduction to Philosophy |*credit hours will vary depending on courses selected

位-Year Humanities Commons ..... 12

| ENG $100 \quad$ Writing Seminar I $^{2}$ |  |
| :--- | :---: |
| Second-Year Writing Seminar ${ }^{3}$ | $0-3$ |
| ENG 200 Writing Seminar II |  |
| Oral Communication | 3 |
| CMM 100 Principles of Oral Communication |  |
| Mathematics | 3 |
| Social Science | 3 |
| Arts | 3 |
| Natural Sciences | 7 |
| Crossing Boundaries | variable |
|  | credit |

Faith Traditions
Practical Ethical Action
Inquiry
Integrative
Advanced Study variable credit
Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3
1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200H or ASI 120.

## Major Requirements

| CHM 123 | General Chemistry <br> \& 123L | 4 |
| :--- | :--- | ---: |
| CMM 100 General Chemistry Laboratory | Principles of Oral Communication |  |
| ECT 110 | Electical Circuits I |  |
| \& 110L | and Electical Circuits I Laboratory | 3 |
| ECT 408 | Data Acquisition \& Measurements | 4 |
| EGR 103 | Engineering Innovation |  |
| ENG 100 | Writing Seminar I | 2 |
| \& ENG 200 | and Writing Seminar II | 2 |
| or ENG 200H | Writing Seminar II | 6 |
| HST 103 | The West \& the World |  |
| IET 316 | Quantitative Analysis | 3 |
| IET 317 | Industrial Economic \& Financial Analysis | 3 |
| IET 323 | Project Management | 3 |
| MCT 110L | Technical Drawing \& CAD Laboratory | 3 |
| MCT 111L | Introduction to Design Laboratory | 2 |
| MCT 220 | Statics \& Dynamics | 2 |
| MCT 221 | Strength of Materials | 3 |
| MCT 231 | Fluid Mechanics | 3 |
| MCT 313 | Industrial Mechanisms | 3 |
| MCT 317 | Machine Dynamics | 3 |
| MCT 330 | Design of Machine Elements | 3 |
| MCT 336 | Fluid Power | 3 |
| \& 336L | and Fluid Power Laboratory | 4 |
| MCT 342 | Thermodynamics | 3 |


| MCT 490 | Mechanical Engineering Technology Senior Project | 3 |
| :---: | :---: | :---: |
| MFG 108L | Manufacturing Processes Laboratory | 1 |
| MFG 204 <br> \& 204L | Materials \& Processes and Materials \& Processes Laboratory | 4 |
| MFG 206L | Dimensional Metrology Laboratory | 1 |
| MFG 208L | Geometric Dimensioning \& Tolerancing Laboratory | 1 |
| MFG 240 | Manufacturing \& Product Design | 3 |
| MFG 431 | Controls for Industrial Automation | 3 |
| MTH 137 | Calculus I with Review | 4 |
| MTH 138 | Calculus I with Review | 4 |
| MTH 207 | Introduction to Statistics | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| $\begin{aligned} & \text { PHY } 201 \\ & \& 201 \mathrm{~L} \end{aligned}$ | General Physics and General Physics Laboratory | 4 |
| $\text { PHY } 202$ \& 202L | General Physics and General Physics Laboratory | 4 |
| REL 103 | Introduction to Religioius \& Theological Studies | 3 |
| SET 100 | Engineering Technology First Year Seminar (2 semesters) | 0 |
| SET 101 | Enrichment Workshop (2 semesters) | 0 |
| SET 153L | Technical Computation Laboratory | 1 |
| SET 200 | Professional Development Seminar (2 semesters) | 0 |
| SET 499 | Seminar | 1 |
| Electives |  | 15 |
| Technical electives ${ }^{2}$ |  | 12 |
| Total Hours |  | 132 |

1 The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200 or ENG 200 H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200 H . ENG 200 H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200 H do not receive credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition.
2 Select from list approved by the Department of Engineering Technology.

## Minor in Mechanical Engineering Technology (mct)

This minor is open to all engineering technology majors except mechanical. The program provides a concentration in the mechanical field that will complement the student's major field of study. All prerequisites and corequisites must be followed.

| Select four courses from: ${ }^{1}$ |  |
| :--- | :--- |
| MCT 221 Strength of Materials <br> MCT 231 Fluid Mechanics <br> MCT 313 Industrial Mechanisms <br> MCT 330 Design of Machine Elements <br> MCT 336 Fluid Power <br> \& 336L and Fluid Power Laboratory <br> MCT 342 Thermodynamics |  |


| MCT 423 | Product Development |
| :---: | :---: |
| MCT 430 | Design of Fluid Power Systems |
| MCT 432 | Heat Power |
| MCT 438 | Heat Transfer |
| MCT 440 | Applied Vibrations |
| MCT 445 <br> \& 445L | Experimental Mechanics and Experimental Mechanics Laboratory |
| MCT 446 | Applied Finite Element Modeling |
| Total Hours | 12 |
| 1 Courses selected may not be those already required for student's major. |  |
| Minor in Automotive Systems (ast) |  |
| This minor is open to all engineering technology majors. It is also available for other majors within the University if certain prerequisites have been met. The program provides a concentration in the automotive field that will compliment the student's major program of study. |  |
| ECT 456 | Automotive Electical \& Safety Systems 3 |
| MCT 456 | Automotive Powertrain \& Chassis Systems 3 |
| Select two courses from: ${ }^{1}$ |  |
| ECT 224 | Digital Computer Fundamentals |
| ECT 357 | Microprocessors I |
| IET 332 | Facilities Layout Design |
| IET 415 | Management of Global Technical Organizations |
| MCT 231 | Fluid Mechanics |
| MCT 342 | Thermodynamics |
| MCT 446 | Applied Finite Element Modeling |
| MFG 204 | Materials \& Processes |
| MFG 204L | Materials \& Processes Laboratory |
| MFG 432 | Plastics, Composites \& Nano Materials \& Processes |

Total Hours
1 Courses cannot be required by student's major.

## Minor in Engineering Technology (egt)

This minor is open to all majors in the College of Arts \& Sciences, the School of Business Administration, and the School of Education and Allied Professions with the appropriate prerequisite background and approval of the Engineering Technology Department Chair. The program introduces the principles of applied engineering and complements many majors at the University.

| Engineering Technology ${ }^{1}$ | 15 |  |
| :--- | :--- | ---: |
| ECT 110 | Electical Circuits I | 3 |
| IET 323 | Project Management | 3 |
| MCT 110L | Technical Drawing \& CAD Laboratory | 2 |
| MFG 204 | Materials \& Processes | 4 |
| \& 204L | and Materials \& Processes Laboratory |  |
| Select one course from: | 3 |  |
| ECT 120 | Electical Circuits II |  |
| ECT 224 | Digital Computer Fundamentals |  |
| ECT 361 | Programming Structures |  |


| IET 317 | Industrial Economic \& Financial Analysis |
| :--- | :--- |
| IET 408 | Lean Management Methods |
| IET 415 | Management of Global Technical Organizations |
| IET 435 | Human Factors |
| MCT 220 | Statics \& Dynamics |
| MCT 231 | Fluid Mechanics |
| MFG 427 | Computer Integrated Manufacturing \& Global <br> Manufacturing |
| MFG 432 |  <br> Processes |
| MFG 434 | Robotics \& Computer Numerical Control |

## Minor in Industrial Automation and Applied Robotic Systems (ARS)

This minor is open to all majors in the School of Engineering. The program provides a concentration in the industrial automation and applied robotic systems field that will complement the student's major field of study. All prerequisites and corequisites must be followed.

| Industrial Automation and Applied Robotic Systems ${ }^{1}$ |  |  |
| :--- | :--- | ---: |
| ECT 452 | Feedback Controls | 3 |
| MFG 424 | Robotics | 3 |
| MFG 431 | Controls for Industrial Automation | 3 |
| MFG 434 | Robotics \& Computer Numerical Control | 3 |
| Total Hours |  | 12 |

1 If the minor's required courses are already required by the student's major, the student may select ECT 224/ECT 224L, MCT 313, and/ or MCT 317 to complete a total of at least twelve semester hours. Students in Engineering programs may not select courses with content similar to courses offered in their major.

## MINOR IN INTEGRATED ARTS AND TECHNOLOGY (IAT)

The Integrated Arts and Technology minor allows students to connect their aptitude for technical discipline with their passion for the arts. Students select one arts program (graphic design, music, or theatre) and take at least 12 credits of coursework in that program. To put their knowledge to work in a practical and beneficial setting, students will also complete a service-learning project related to their arts program, which may provide academic credit.

This minor is open to all students enrolled in School of Engineering programs. All prerequisites and corequisites must be followed.

## Graphic Design Emphasis

Select four courses from:

| CMM 344 | Multimda Dsgn/Prd I |
| :--- | :--- |
| (p. 374) |  |
| CMM 444 | Multmedia Dsn\&Prd II |
| (p. 374)  <br> SET 400 Special Topics <br> (p. 374)  |  |


| VAD 215 | Computr Appl-Desgn |
| :--- | :--- |
| (p. 374) |  |
| VAD 218 | Computr Appl-Illust |
| (p. 374) |  |
| VAD 220 | Design Processes I |
| (p. 374) |  |
| VAD 240 | Form and Concept |
| (p. 374) |  |
| VAD 310 | Computer Illustratn |
| (p. 374) |  |
| VAD 320 | Design Processes II |
| (p. 374) |  |
| VAD 344 | Desgn for Multmda I |
| (p. 374) |  |
| VAD 351 | Motion Design |
| (p. 374) |  |
| VAD 360 | Web Design |
| (p. 374) |  |
| VAP 340 | Digital Processes II |
| (p. 374) |  |
| VAR 345 | Cmptr Modl\&Anmtn I |
| (p. 374) |  |
| VAR 440 | Cmptr ModI\&Anmtn II |
| (p. 374) |  |
| VAR 445 | Cmptr Modl\&Anmtn III |
| (p. 374) |  |
| Total Hours |  |
| Technical Music Emphasis |  |
| Select four courses from: |  |
| CMM 340 | Fund of Broadcasting |
| (p. 374) |  |
| CMM 341 | Audio Production |
| (p. 374) |  |
| MUS 205 | Music, Technology and Culture |
| (p. 374) |  |
| MUS 223 | Intro Music Tech |
| (p. 374) |  |
| MUS 323 | Rec\&Digital Media |
| (p. 374) |  |
| SET 400 | Special Topics |
| (p. 374) |  |

Total Hours 12
Television and Stage Production Emphasis
Select four courses from: 12
CMM 341 Audio Production 3
(p. 374)

CMM 342 Fund-Video Productn 3
(p. 374)

CMM 442 Adv Television Prod 3
(p. 374)

SET 400 Special Topics 4
(p. 374)

THR 203 Technical Productn 3

| THR 305 <br> (p. 374) | Theatre Stagecraft | 3 |
| :--- | :--- | ---: |
| THR 307 | Theatre Lighting | 3 |
| (p. 374) |  | 34 |

## Minor in Sustainable Manufacturing (smf)

This minor is open to all majors in the School of Engineering, except Global Manufacturing Systems Engineering Technology (GMT). The program provides a concentration in sustainable manufacturing that will complement the student's major field of study. All prerequisites and corequisites must be followed.

| Sustainable Manufacturing ${ }^{1}$ |  |
| :---: | :---: |
| $\begin{aligned} & \text { ECT } 461 \\ & \text { (p. } 374 \text { ) } \end{aligned}$ | Powr Distrbtn\&Contrl |
| $\text { MFG } 204$ (p. 374) | Materials\&Processes |
| MFG 204L <br> (p. 374) | Matrls\&Processes Lab |
| $\begin{aligned} & \text { MFG } 432 \\ & (\text { p. 374) } \end{aligned}$ | Mtrls\&Proc Plastics |
| $\begin{aligned} & \text { MFG } 438 \\ & \text { (p. 374) } \end{aligned}$ | Sustnble Mfg\&Prd Des |
| Total Hours |  |
| 1 If the minor's required courses are already required by the stud major, the student may select IET 420 (p. 374), MEE 472 (p. 374), MEE 473 (p. 374), MEE 478 (p. 374), and/or SEE 250 (p. 374) to complete a total of at least twelve semester hous Students in Engineering programs may not select courses with content similar to courses offered in their major. |  |
| Electronic and Computer engineering technology |  |

## First Year

## Fall

SET 100
SET 101
EGR 103
SET 153L
MTH 137 (Satisfies CAP
Math Requirement)
CHM 123 (Satisfies CAP Natural Science)

CHM 123L

ENG 100 (Satisfies CAP Writing Seminar)
PHL 103 (Satisfies CAP
First-Year Humanities
Common)

| Hours Spring | Hours |
| :---: | :---: |
| 0 SET 100 | 0 |
| 0 SET 101 | 0 |
| 2 ECT 110 | 3 |
| 1 ECT 110L | 1 |
| 4 MTH 138 | 4 |
| 3 HST 103 (Satisfies CAP First-Year Humanities Common) | 3 |
| 1 REL 103 (Satisfies CAP <br> First-Year Humanities Common) | 3 |
| 3 CMM 100 (Satisfies CAP Communication) | 3 |
| 3 |  |

## Second Year

Fall
SET 200
ECT 224
ECT 224L
ECT 120
ECT 361
PHY 201
PHY 201L

ENG 200 (Satisfies CAP
Second Year Writing
Seminar)

Third Year
Fall
MCT 110L
ECT 358
ECT 358L
ECT 306
ECT 306L

IET 316
Art Study (Satisifies CAP Art
Study)

Fourth Year
Fall
Hours Spring
Hours
3 ECT 490
1 ECT 452
1-3 TECH Elective
,
3 TECH Elective
3 Advanced HST (Satisifies CAP Crossing Boundaries)
3
Hours Spring
Hours
0 SET 200
3 MCT 2203
1 ECT 3573
3 ECT 2063
3 ECT 206L 1
3 MTH 2073
1 Social Science (Satisfies 3 CAP Social Science)
3

17

Hours Spring Hours
2 ECT 408
3 ECT 3623
1 ECT 4653
3 TECH Elective 3
1 Advanced PHL Ethics 3
(Satisifies CAP Crossing
Boundaries and Practical Ethical Action)

3 MFG 431
3

16
17

ECT 466
SET 499
IET 317
IET 323
TECH Elective

Advanced REL (Satisifies
CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)
,

Total credit hours: 129-131
industrial engineering technology
First Year

0 SET 100
0 SET 101

3 MFG 204L

## CHM 123L

ENG 100 (Satisfies CAP Writing Seminar)

REL 103 (Satisfies CAP
First-Year Humanities Common)
Second Year
Fall
SET 200 (Satisfies CAP

Second Year Writing Seminar)
IET 317
IET 323
MCT 110L
MCT 220

MTH 207
ENG 200 (Satisfies CAP
Second Year Writing
Seminar)

\section*{Third Year <br> Fall

IET 408
IET 332
PHY 201
PHY 201L
MFG 108L
MFG 438

Social Science (Satisfies
CAP Social Science)}
1 HST 103 (Satisfies CAP
First-Year Humanities
Common)
3 PHL 103 (Satisfies CAP
First-Year Humanities
Common)
3

17
Hours Spring
0 SET 200

1-3 MCT 313
3 IET 318
2 MCT 111L
3 Art Study (Satisifies CAP Art
Study)
3 MFG 208L
3 MFG 206L

CMM 100 (Satisfies CAP Communication)
15-17
Hours Spring
3 IET 418
3 IET 316
3 ECT 110
1 ECT 110L
1 TECH Elective
3 Advanced PHL Ethics
(Satisifies CAP Crossing
Boundaries and Practical
Ethical Action)
3
$\mathbf{1 7}$

## Fourth Year

| Fall | Hours Spring |
| :--- | :---: |
| SET 499 | 1 IET 490 |
| IET 420 | 3 IET 415 |
| IET 435 | 3 TECH Elect |
| TECH Elect | 3 TECH Elect |
| TECH Elect | 3 Advanced HST (Satisifies |
|  | CAP Crossing Boundaries) |

## Advanced REL (Satisifies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice <br> Total credit hours: 129-131 <br> Global Manufacturing Systems engineering technology

## First Year

Fall
SET 100
SET 101
MCT 110L
MTH 137 (Satisfies CAP
Math Requirement)
MFG 108L
CHM 123 (Satisfies CAP Natural Science)
CHM 123L
ENG 100 (Satisfies CAP Writing Seminar)

REL 103 (Satisfies CAP
First-Year Humanities
Common)

Second Year
Fall
MCT 111L
MFG 208L
MFG 206L
IET 408
MCT 220
SET 200
CMM 100 (Satisfies CAP
Communication)

MTH 207

Third Year
Fall
MCT 336
MCT 336L
MCT 313
MFG 434
PHY 201
PHY 201L

MFG 432

Fourth Year

Hours Spring
Hours
1-3 MFG 490
Hours
0 SET 100
0 SET 101
2 SET 153L
4 EGR 103

1 MTH 138
3 MFG 204

1 MFG 204L
3 PHL 103 (Satisfies CAP 3
First-Year Humanities Common)
3 HST 103 (Satisfies CAP 3
First-Year Humanities Common)

17

Hours Spring Hours
2 ECT 1103
1 ECT 110L 1
1 SET 2000
3 IET 318 3
3 MFG 2403
0 MCT 2213
3 ENG 200 (Satisfies CAP 3
Second Year Writing Seminar)
3
16

Hours Spring
Hours
3 IET 323
1 SET $499 \quad 1$
3 MFG 4313
3 Language Requirement 3
3 TECH Elect 3
1 Art Study (Satisifies CAP Art 3 Study)

3
17
16

3


## ECT 357. Microprocessors I. 3 Hours

Study of microprocessor architecture, hardware, software, applications, and development tools. Prerequisite(s): ECT 224.

## ECT 358. Microprocessors II. 3 Hours

Advanced microprocessors study including development tools and software with regards to interfacing equipment in applications. Prerequisite(s): ECT 357, ECT 361. Corequisite(s): ECT 358L.

## ECT 358L. Microprocessors II Laboratory. 1 Hour

To accompany ECT 358. Emphasis on microcomputer programming. Three hours of laboratory a week. Prerequisite(s): ECT 357.

## ECT 361. Programming Structures. 3 Hours

The study of programming language concepts. Emphasis on the C language and its application to microcomputer hardware and software development. Prerequisite(s): SET 153L.

## ECT 362. Concepts \& Applications of Computer Operating Systems.

## 3 Hours

Introduction to the fundamentals and applications of computer operating systems and the interaction of hardware and software. Operating systems for large-scale, mini-, and microcomputers introduced through case studies. Prerequisite(s): ECT 357, ECT 361.

## ECT 400. Selected Topics. 1-4 Hours

Investigation and discussion of current technical topics in electronic and computer engineering technology. May be taken more than once. Prerequisite(s): Permission of department chairperson.
ECT 408. Data Acquisition \& Measurements. 2 Hours
Measurement and evaluation of the characteristics of engineering materials, structural mechanics, electromechanical systems, and physical systems. Emphasis on data acquisition, signal conditioning and manipulation, and virtual instrumentation. Prerequisite(s): ECT 110L; (ECT 206 or MCT 221); ENG 102; SET 153L.

## ECT 452. Feedback Controls. 3 Hours

Study of principles of control including Nyquist criteria, Bode plots, PID loops, motor control virtual instrumentation, and advanced concepts. Laplace transform analysis is utilized. Prerequisite(s): ECT 306, ECT 408.

## ECT 456. Automotive Electical \& Safety Systems. 3 Hours

Theory and design of charging systems, batteries, control systems, safety systems, and various sensor technologies. Overview of manufacturing and commercial aspects of the automotive industry. Prerequisite(s): ECT 110 or EGR 203.

## ECT 461. Power Distribution \& Control. 3 Hours

Study of power distribution systems including components, basic operation, polyphase circuits, characteristics, and application. Emphasis on the generation of electric power, its transmission, and its application to high power systems. Prerequisite(s): ECT 110.

## ECT 465. Digital Data Communications. 3 Hours

Study of communication methods and protocols. Applications to networks, satellite communication, phone systems, fiber optics, modems, and other data transmission. A special emphasis is placed on digital networks. Prerequisite(s): ECT 358 or equivalent.

## ECT 466. Microcomputer Architecture. 3 Hours

To develop an understanding of the basic hardware architecture of industry standard microcomputers including CPUs, standard busses, memory, mass storage devices, Systems-on-a-Chip and their implementation, I/O devices, and network interfaces. Study of architecture of recent microprocessors. Prerequisite(s): ECT 357 or equivalent.

## ECT 490. Senior Project. 3 Hours

The design, construction and presentation of an original project. The project may be individual or part of an interdisciplinary engineering technology team project. Written and oral reports. Prerequisite(s): CMM 110, (CMM 111 or CMM 112); ECT 408; IET 323; MTH 138; senior status.

## ECT 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): ECT 493.

## Engineering Technology Courses

## SET 100. Engineering Technology First Year Seminar. 0 Hours

 Seminar for all engineering technology majors. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, engineering technology programs and careers. Emphasizes professional ethics, critical thinking and communications, and team dynamics. Academic policies, academic planning, registration procedures, counseling and career placement services. Required of all first-year engineering technology students both semesters.
## SET 101. Enrichment Workshop. 0 Hours

Workshop structured to provide collaborative learning for first-year Engineering Technology students. Work will focus on math, chemistry and other first year courses. Required of all first-year engineering technology students both semesters.

## SET 153L. Technical Computation Laboratory. 1 Hour

Introduction to applications and use of computers for engineers with concentration on spreadsheets, electronic communications, and object oriented programming using Visual Basic.

## SET 198. Research \& Innovation Laboratory. 1-6 Hours

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

## SET 200. Professional Development Seminar. 0 Hours

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

## SET 298. Research \& Innovation Laboratory. 1-6 Hours

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

SET 300. Engineering Technology Transfer Seminar. 0 Hours A seminar for full-time engineering technology majors who transferred from another academic institution. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, engineering technology programs, and careers. Emphasizes professional ethics, critical thinking and communication, and team dynamics. Academic policies, academic planning, registration procedures, counseling, and career placement services.

## SET 398. Research \& Innovation Laboratory. 1-6 Hours

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

## SET 400. Special Topics in Engineering Technology. 0-4 Hours

Investigation and discussion of current topics in engineering technology. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## SET 498. Research \& Innovation Laboratory. 1-6 Hours

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

## SET 499. Seminar. 1 Hour

Career planning for engineering technology majors. The job search process, resume preparation, the job interview, professional development. Required of all engineering technology majors in the junior or senior year.

## Global Manufact Sys Egr Tech Courses

## MFG 108L. Manufacturing Processes Laboratory. 1 Hour

Application of metal-cutting theory using single- and multiple-point cutting tools, basic metal removal process of toolroom and production machines. Experience on conventional milling machines, shapers, lathes, surface grinders, and drill presses. Three hours of laboratory a week.

## MFG 204. Materials \& Processes. 3 Hours

Chemical and physical properties of metals, ceramics, and polymers; casting processes; powdered metallurgy; metal forming; plastics processes. Oral and written presentation of a team case study. Corequisite(s): MFG 204L.

## MFG 204L. Materials \& Processes Laboratory. 1 Hour

Testing of materials for tensile strength, impact and hardness properties, cooling curves and equilibrium diagram development, heat treating and hardenability curve determination, cold forming, plastics materials processing, micro polishing and metallography; visits to local industries. Three hours of laboratory a week. Corequisite(s): MFG 204.

MFG 206L. Dimensional Metrology Laboratory. 1 Hour
Theory and practice of precision measurement including the surface plate, angle and sine plates; surface texture and roundness; optical microscope and profile projector; mechanical and electronic gages; coordinate measuring machine; length standards and height gages; fixed and functional gages; sources of measurement error. Three hours of laboratory a week. Prerequisite(s): MCT 110L; MTH 137.
MFG 208L. Geometric Dimensioning \& Tolerancing Laboratory. 1 Hour
Study of the use of ANSI Y14.5M-1994, the engineering standard for geometric dimensioning and tolerancing. Includes the proper use of GD\&T symbols, reading and interpretation of engineering drawings, techniques for determining part adherence to design requirements and workmanship standards. Prerequisite(s): MCT 110L.
MFG 240. Manufacturing \& Product Design. 3 Hours
Manufacturing planning; process planning; advanced cutting tools; workholders; power presses-blanking, forming, draw dies, fine blanking; group technology, gage, jig, and fixture design. Prerequisite(s): MCT 110L; MFG 108L, MFG 204.

## MFG 400. Selected Manufacturing Topics. 1-4 Hours

Investigation and discussion of current topics in manufacturing engineering technology. May be taken more than once. Prerequisite(s): Permission of department chairperson.

## MFG 424. Robotics. 3 Hours

Study of robotics including history, robot geometry, cost justification, endeffector (types, use, and design), sensors, and programming. Application of robots in industries. Robot programming and operation projects and end-effector design projects. Prerequisite(s): MCT 220, MCT 313; SET 153L.

## MFG 427. Computer Integrated Manufacturing \& Global Manufacturing. 3 Hours

Computer Integrated Manufacturing (CIM) systems and interrelationships; group technology, computer-aided process planning, expert systems, local area networks, automated flow lines, data collection, and material handling. Also covered are global manufacturing issues and specific country concerns. Prerequisite(s): ECT 110; MFG 108L, MFG 204; SET 153L.

## MFG 431. Controls for Industrial Automation. 3 Hours

Topics include: fundamentals of digital logic, pneumatic power, electromechanical sensors and actuators, pneumatic and electrical control circuit analysis and design, industry safety and design standards, concepts of mechatronics, programmable logic controllers, and networking communications. Prerequisite(s): ECT 110; SET 153L.

## MFG 432. Plastics, Composites \& Nano Materials \& Processes. 3 Hours

Introduction to the more common plastics, composites, and nano engineering materials and their properties. Study of processes including extrusion, injection molding, blow molding, compression and transfer molding, and forming. Topics on part and tooling design. Prerequisite(s): CHM 123; MFG 204.

## MFG 434. Robotics \& Computer Numerical Control. 3 Hours

Programming of CNC turning and machining centers and industrial robots; application of CAM software to design and edit CNC and robot programs, edit programs, and display tool and motion paths. Parametric part programming concepts to produce complex surfaces. Programming of robotic devices. Prerequisite(s): MCT 110L; MFG 108L; SET 153L.

## MFG 435. Advanced Numerical Control. 3 Hours

Instruction in the programming of complex, multi-axis CNC machines. Extended parametric programming. Programming language techniques. Prerequisite(s): MFG 434.
MFG 438. Sustainable Manufacturing \& Product Design. 3 Hours Design for the environment, sustainable manufacturing processes and business practices to support these topics are developed. Prerequisite(s): (MFG 108L, MFG 204; MTH 138) or permission of instructor.

## MFG 490. Senior Project. 3 Hours

Study and research in a specific area that integrates major elements from previous design and manufacturing process courses, culminating in individual and/or group projects, technical reports, and presentations. Prerequisite(s): CMM 110, (CMM 111 or CMM 112); IET 323; MFG 108L, MFG 208L, MFG 240, MFG 431; MCT 111L; MTH 138; senior status.

## MFG 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## MFG 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): MFG 493.

## Industrial Engineering Tech Courses

## IET 230. Work Measurement. 3 Hours

Fundamentals of work simplification, motion economy, and productivity improvement using the techniques of time-and-motion study. Setting of labor standards using the techniques of stop watch, pre-determined time, standard data, and work sampling. Prerequisite(s): MTH 137.

## IET 230L. Work Measurement Laboratory. 1 Hour

The application of real-world time-and-motion-study techniques such as operation process, worker-machine, and assembly charts. Calculations for time standards, production efficiency, line balance, cost reduction, labor, and equipment. A written and oral report on a team project. Three hours of laboratory each week. Prerequisite(s): MTH 137 Corequisite(s): IET 230.

## IET 316. Quantitative Analysis. 3 Hours

Introduction of the mathematical techniques used to support decision making and managerial analysis. Probability theory, decision theory, linear programming, queuing theory, matrix algebra, differential and integral calculus, and differential equations. Prerequisite(s): MTH 138 or MTH 168; MTH 207.

IET 317. Industrial Economic \& Financial Analysis. 1-3 Hours
Comparison of manufacturing or service industry projects and investments based on their economic value. Quantification of costs and benefits; analysis using present worth, annual worth, and rate of return methods. Study of simple and compound interest. Basic financial accounting concepts, including balance sheets, income statements, change of financial condition, etc. Prerequisite(s): MTH 137.

## IET 318. Statistical Process Control. 3 Hours

Statistics and probability theory applied to produce control charts (x-bar, $\mathrm{R}, \mathrm{s}, \mathrm{p}, \mathrm{u}$, and c ) to monitor processes. Interpretation and application of these charts. Problem solving techniques, Pareto analysis, and modern quality management techniques. Prerequisite(s): MTH 207

## IET 319. Quality Improvement Methods. 3 Hours

Study of problem-solving methodologies and techniques. Team development. Students will learn to use Pareto diagrams, force field analysis, cause and effect diagrams, process mapping, and other problem-solving tools. Quality costs, product liability, and ethics are also covered. Prerequisite(s): IET 318.

## IET 320. Quality Assurance Techniques. 3 Hours

Students will be exposed to a variety of current quality assurance topics that companies use to improve quality, increase productivity, and reduce costs. Topics include: total preventive maintenance, quality function deployment, reliability engineering, design of experiments, and sample size selection. Prerequisite(s): IET 318; MTH 207.

## IET 321. Quality Management. 3 Hours

Provides students with an understanding of managing a total quality environment to improve quality, increase productivity and reduce costs. An introduction to Deming, Juran, and others. Total Quality Management implementation strategies, requirements of ISO 9000, QS 9000, and the Malcolm Baldrige award will be covered. Prerequisite(s): IET 318; MTH 207.

## IET 323. Project Management. 3 Hours

Study of the structure, techniques, and application of project management including project proposals, project plans, decision making, styles of management, and communications. Semester team project with written and oral presentations. Prerequisite(s): SET 153L.

## IET 332. Facilities Layout Design. 3 Hours

Design of manufacturing and service facilities for the most efficient flow of raw materials, work-in-process, and completed stock through a work place. Facilities layout, material handling, and warehousing in relation to trends toward reduced inventory, smaller lot sizes, and just-in-time. Prerequisite(s): MCT 110L. Corequisite(s): MCT 111L.

## IET 346. Six Sigma Yellow Belt. 1.5 Hour

This course is designed to facilitate skill acquisition along with clinical reasoning and decision making as it relates to the physical therapy care and management of various advanced topics including cardiopulmonary rehabilitation, women's health issues, manual therapy strategies, electrotherapeutics as well as orthopedic, neurological, and pediatric therapeutic interventions. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

## IET 400. Selected Topics. 1-4 Hours

Self-paced research course. Preparation of a documented written research project on an engineering technology subject. May not be taken more than once. Prerequisite(s): Junior or senior status; permission of department chairperson.

## IET 408. Lean Management Methods. 3 Hours

Study of the principles and current practices of optimizing production using Lean Management concepts. Lean Thinking, Just-in-Time, Kaizen, set-up reduction, pull systems, focused factories, standard operations, total productive maintenance, and defect-free processing methods are studied and applied. Prerequisite(s): Junior or senior status.

IET 415. Management of Global Technical Organizations. 3 Hours Study of the structure of industrial and service organizations; study of the duties and responsibilities of a manager or supervisor in a global technical organization in developing an effective project or production team. Study of labor administration; labor legislation, current labor practices and international management.

IET 418. Cost Estimating \& Control. 3 Hours
Study of the fundamentals of cost estimating of labor, material, and overhead for products, projects, operations, and systems. The concepts of internal and external cost estimating, types of costs, budgets, and profit. Semester team and individual projects, written and oral. Study of job order and process cost accounting, activity based costing, and cost-volume-profit relationships. Prerequisite(s): MTH 137.
IET 420. Industrial \& Environmental Safety. 3 Hours
Application of safety techniques and principles to identify and correct unsafe situations and practices. Study of system safety, failure modes and effects analysis, fault tree analysis, preliminary hazard analysis, hazardous materials and practices, OSHA, health and personal protection.

## IET 423. The IET in Service Organizations. 3 Hours

Case studies, articles, guest speakers, and projects to provide insight into how industrial engineering technology skills and training can be applied to service industries including hospitals, banks, and eating and retailing establishments. Prerequisite(s): IET major; junior status.

## IET 425. Elements of Cost Control. 3 Hours

Survey of the methods of breakdown and cost analysis of labor, material, and overhead used in manufacturing and service organizations.
Basic financial and cost accounting including balance sheets, income statements, change of financial condition, ratio analysis, and ActivityBased Costing. Prerequisite(s): MTH 137.

## IET 435. Human Factors. 3 Hours

Methods to improve the interface between humans and their environment. Human characteristics are studied to determine the best way to design the task, product, work station, or other environmental features to accommodate the human. Written and oral projects. Prerequisite(s): (Junior or senior status) or permission of instructor.

## IET 446. Six Sigma Green Belt. 3 Hours

Learn, practice, and use six-sigma tools in preparation of a final certification project in a commercial business situation. Use, analyze and solve an identified business variation problem to achieve industry recognized certification.

## IET 490. Senior Project. 3 Hours

Applications of IET principles to a real world project using student teams for analysis and productivity improvement. Students will manage a project, applying planning, scheduling, monitoring, and control techniques. Oral and written project proposals, status updates, and final reports presented by teams of students to the management of the sponsoring organizations. Prerequisite(s): CMM 110, (CMM 111 or CMM 112); IET 317, IET 323, IET 332, IET 408, IET 435; MTH 138; senior status.

## IET 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis.
Restricted to students in University Honors Program.

## IET 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): IET 493.

## Mechanical Engineering Tech Courses

## MCT 110L. Technical Drawing \& CAD Laboratory. 2 Hours

Technical sketching and shape description, orthographic projection theory, multi-view drawings, necessary views, sectional views, working and shop drawings, dimensioning practices, tolerancing, thread and fastener representation and nomenclature, assembly and detail drawings. Six hours of laboratory a week using instruments and commercial computer-aided design (CAD) software.

## MCT 111L. Introduction to Design Laboratory. 2 Hours

Advanced topics of Computer Aided Design using three-dimensional, parametric, solid modeling software. Laboratory assignments involving the CAD software are completed through a series of individual and team design projects. Introduction to design requirements, conceptualization, and design decisions. Computer drafting topics such as ANSIY 14.5M-1994 geometric dimensioning and tolerancing standards, weld symbols, machining and surface finish symbols. Blueprint reading. Prerequisite(s): MCT 110L.

## MCT 220. Statics \& Dynamics. 3 Hours

Study of forces on bodies at rest and in motion using Newton ¿¿s three laws of motion. Vectors, force systems, components, reactions, resultants, free body diagrams, equilibrium, centroids, moment of inertia, kinetics, and kinematics. Prerequisite(s): SET 153L. Corequisite(s): MTH 137.

## MCT 221. Strength of Materials. 3 Hours

Analysis and design of load-carrying members, considering stress, strain, and deflection. Study of direct tension, compression, and shear; torsion; shear and moment diagrams; bending; combined stress; analysis of columns; pressure vessels. Prerequisite(s): MCT 220; MFG 204, MFG 204L; MTH 137; SET 153L.

## MCT 231. Fluid Mechanics. 3 Hours

Fluid properties, fluid statics including manometry, submerged surfaces, buoyancy and stability of floating bodies. The principles of fluid flow including Bernoulli's and energy equations, energy losses, and pump power. Analysis and design of pipe line systems and open channels; pump selection. Prerequisite(s): MTH 137; SET 153L.

## MCT 313. Industrial Mechanisms. 3 Hours

Design and analysis of linkages and cams. Graphical solutions to kinematics problems including the concepts of instantaneous motion and relative motion. Development and analysis of motion diagrams. Study of geometric features of gears and gear transmission systems. Prerequisite(s): MCT 110L, MCT 220; MTH 137; SET 153 L .

## MCT 317. Machine Dynamics. 3 Hours

Principles of applied engineering mechanics as they relate to machines; static force analysis in both 2 and 3 dimensional systems, kinetics of machine components by the methods of force-mass-acceleration, workenergy, and impulse-momentum; machine balancing; introduction to mechanical vibrations. Prerequisite(s): MCT 111L, MCT 313; MTH 138.

## MCT 330. Design of Machine Elements. 3 Hours

Analytical design techniques used to evaluate machine elements; stress analysis, working stress, failure theories, fatigue failure; design methods for spur gears, shafts, keys and couplings, roller and journal bearings, and springs. Original design project. Prerequisite(s): MCT 111L, MCT 221; MFG 208L; SET 153L.

## MCT 336. Fluid Power. 3 Hours

Study of hydraulic and pneumatic fluid power components and systems used in industrial, mobile, and aerospace applications; standard symbols in circuit design; circuit analysis; specification for pumps, valves, cylinders, and circuits; hydraulic fluids; filtration; electric motors; system efficiencies; proportional control and electrohydraulic servo control systems; seals; fluid conductors; pneumatic components and systems. Library research project. Prerequisite(s): MCT 221. Corequisite(s): MCT 336L.

## MCT 336L. Fluid Power Laboratory. 1 Hour

To accompany MCT 336. Evaluation of fluid power components: pressure, flow, RPM, sound level, current, voltage, power, torque, and time. Graphical design, computational analysis, assembly, and testing of typical circuits and systems. Testing of hydraulic fluids for viscosity, pour point, flash and fire point, specific gravity. Three hours of laboratory a week.

## MCT 342. Thermodynamics. 3 Hours

Energy analysis of engineering systems using the concepts and laws of thermodynamics. The principle of the mechanical equivalent of heat, behavior of pure substances, use of thermodynamic property tables, and study of gas mixtures. Application of the Carnot cycle to both heat engines and reversed heat engines. Prerequisite(s): MCT 231; MTH 138; SET 153L.

## MCT 400. Selected Mechanical Topics. 1-4 Hours

Investigations and discussion of cur-rent technical topics in mechanical engineering technology. Research report. May be taken more than once. Prerequisite(s): Permission of department chairperson.
MCT 423. Product Development. 3 Hours
Synthesis of mechanical devices and systems. Emphasis on the integration of various machine elements into a single unit. Activities include design, scheduling, budgeting, purchasing, fabrication, assembly and performance testing of an original team project. Prerequisite(s): MCT 330.

## MCT 430. Design of Fluid Power Systems. 3 Hours

Energy efficiency; pressure drop determinations, variable volume pressure-compensated pumps, accumulators, proportional and electrohydraulic valves, cylinder design, hydraulic motor selection; circuit design, open and closed loop systems, power unit design; sizing of electric motors; use of industrial data and National Fluid Power Assn.-JIC design standards. Individual design project. Prerequisite(s): MCT 336.

## MCT 432. Heat Power. 3 Hours

Applications of the principles of thermodynamic cycles. Analysis of energy transfer systems such as internal combustion and gas turbine engines. Power generation through steam cycles including reheat and regenerative cycles. Reversed heat engine cycles and vapor compression cycles used in heating and cooling. Prerequisite(s): MCT 342; SET 153L.

## MCT 438. Heat Transfer. 3 Hours

The principles of conduction, convection, and thermal radiation energy transfer. Conduction through series and parallel walls, pipes, and containers. Forced and free convection through films, thermal radiation of energy between surfaces, and the overall transfer of heat. Prerequisite(s): MCT 231; SET 153L.

## MCT 440. Applied Vibrations. 3 Hours

Free and forced vibration of single degree of freedom systems with and without damping. Industrial applications including reciprocating and rotating machinery, balancing, isolation, and noise reduction. Demonstrations of vibration sensors and instrumentation. Prerequisite(s): MCT 317; SET 153L.

## MCT 445. Experimental Mechanics. 3 Hours

The selection, application, and use of strain gages and strain gage rosettes. Transformation of stress and strain. Advanced mechanics of materials topics with empirical verification of theoretical predictions. Prerequisite(s): MCT 221.

## MCT 445L. Experimental Mechanics Laboratory. 1 Hour

Installation of strain gauge rosettes. Experiments to determine the state of strain and stress in structures using strain gauges, photoelasticity, and brittle coatings. Vibration measurement using strain gauges, accelerometers, and motion transducers. Written and oral reports.

## MCT 446. Applied Finite Element Modeling. 3 Hours

Introduction to the fundamentals of structural finite element modeling. Geometry creation, element types, material specification, problem solution and results postprocessing. A focus is placed on modeling techniques using commercially available software. Prerequisite(s): MCT 221; SET 153L.

MCT 456. Automotive Powertrain \& Chassis Systems. 3 Hours Theory and design of engines, transmissions, suspension, and chassis systems. Overview of manufacturing and commercial aspects of the automotive industry. Prerequisite(s): EGR 201 or MCT 220.
MCT 490. Mechanical Engineering Technology Senior Project. 3 Hours
Bringing together analytical and graphical techniques from previous courses to accomplish the design of a complete mechanism, machine, or mechanical system. Conceptual, preliminary, and final design. Prototyping and evaluation of an original team project. Written and oral reports. Prerequisite(s): CMM 110, (CMM 111 or CMM 112); IET 323; MCT 111L, MCT 317, MCT 330; MTH 138; senior status.

## MCT 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## MCT 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): MCT 493.

# Mechanical and Aerospace Engineering 

Major:

- Bachelor of Mechanical Engineering (p. 391) Concentrations:
- Aerospace Engineering (p. 392)
- Energy Systems-Mechanical (p. 392)

Minors:

- Aerospace Engineering (p. 393)
- Mechanical Systems (p. 393)

Mechanical engineers apply principles of motion, energy, force, materials and mathematics to design and analyze a wide variety of products and systems. The field requires an understanding of core concepts including mechanics, kinematics, thermodynamics, heat transfer, materials science, and controls. Mechanical engineers use these core principles along with tools like computer-aided engineering and product life cycle management to design and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, automotive systems, aircrafts, robotics, medical devices and more. Today, mechanical engineers are pursuing developments in such fields as composites, mechatronics, nanotechnology, and are helping to create a more sustainable future.

The mechanical engineering curriculum serves as a broad-based education for positions in these diverse fields or for graduate study leading to advanced degrees. The first part of the mechanical engineering curriculum provides a firm foundation in mathematics, physics, chemistry, computer-aided drawing and conceptual design, and the humanities. The second part of the curriculum provides the engineering science fundamentals and laboratory experiences necessary for testing, design, as well as continued learning in the humanities, arts, and social sciences. The final part of the curriculum emphasizes synthesis of knowledge through major design projects. The curriculum includes sufficient elective courses to permit a concentration in aerospace, energy systems, and engineering as well as minors in several other areas.

The education experience, guided by the University of Dayton Catholic and Marianist heritage, seeks to prepare graduates who will:

- have the ability to apply mathematics, science, and engineering fundamentals and computational tools to design components, systems and/or processes;
- have the ability to design and conduct experiments and analyze and interpret data;
- have the ability to communicate their ideas/solutions effectively;
- serve as effective team members and leaders;
- understand the social, environmental and economic impact of engineering in a global context;
- be able to think critically about contemporary issues;
- continue their personal and professional development by engaging in lifelong learning;
- integrate ethical action, integrity, and service into their profession and lives.


## Faculty

J. Kelly Kissock, Chairperson

Professors Emeriti: Chuang, Doepker, Eastep, Eimermacher, Schauer
Professors: Doyle, Ervin, Hallinan, Jain, Kashani, Kissock, Murray
Associate Professors: Altman, Petrykowski, Pinnell
Assistant Professors: Bigelow,Choi, Rumpfkeil
Lecturer: Henrick

## Bachelor of Mechanical Engineering (MEE) minimum of 132 Credit hours

Common Academic Program (CAP)<br>*credit hours will vary depending on courses selected

First-Year Humanities Commons ${ }^{1}$

| HST 103 | The West \& the World |  |
| :---: | :---: | :---: |
| REL 103 | Introduction to Religioius \& Theological Studies |  |
| PHL 103 | Introduction to Philosophy |  |
| ENG 100 | Writing Seminar I ${ }^{2}$ |  |
| Second-Year Writing Seminar ${ }^{3}$ |  | 0-3 |
| ENG 200 | Writing Seminar II |  |
| Oral Communication |  | 3 |
| CMM 100 | Principles of Oral Communication |  |
| Mathematics |  | 3 |
| Social Science |  | 3 |
| Arts |  | 3 |
| Natural Sciences |  | 7 |
| Crossing Boundaries |  | variable credit |

Faith Traditions
Practical Ethical Action
Inquiry

| Integrative | variable <br> credit |
| :--- | ---: |
| Advanced Study |  |
| Philosophy and/or Religious Studies | 3 |
| Historical Studies | $0-3$ |
| Diversity and Social Justice |  |
| Major Capstone |  |

1 Completed with ASI 110 and ASI 120.
2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
3 Completed with ENG 200 H or ASI 120.

## Major Requirements

| CHM 123 | General Chemistry | 3 |
| :--- | :--- | :--- |
| CHM 123L | General Chemistry Laboratory | 1 |
| or PHY 210L | General Physics Laboratory |  |
| CMM 100 | Principles of Oral Communication | 3 |
| ECE 201L | Circuit Analysis Laboratory | 1 |
| EGM 202 | Dynamics | 3 |
| EGM 303 | Mechanics II | 3 |
| EGR 100 | Enrichment Workshop (2 semesters) | 0 |
| EGR 103 | Engineering Innovation | 2 |
| EGR 201 | Engineering Mechanics | 3 |
| EGR 202 | Engineering Thermodynamics | 3 |
| EGR 203 | Electrical \& Electronic Circuits | 3 |
| ENG 100 | Writing Seminar I | 6 |
| \& ENG 200 | and Writing Seminar II |  |
| or ENG 200H | Writing Seminar II | 3 |
| HST 103 | The West \& the World | 0 |
| or HST 198 | History Scholars' Seminar |  |
| MEE 101 | Introduction to Mechanical Engineering (2 | 1 |
| MEE 104L | semesters) | Computer Graphics I |
| MEE 200 | Professional Development Seminar (2 semesters) | 0 |
| MEE 227L | Computer Graphics II | 1 |


| MEE 308 | Fluid Mechanics | 3 |
| :---: | :---: | :---: |
| MEE 312 <br> \& 312L | Engineering Materials I and Materials Laboratory | 4 |
| MEE 314 | Computational Methods | 3 |
| MEE 321 | Theory of Machines | 3 |
| MEE 341 | Engineering Experimentation | 3 |
| MEE 410 <br> \& 410L | Heat Transfer and Thermo-Fluids Laboratory | 4 |
| MEE 415 | Professional Development I | 0 |
| MEE 416 | Professional Development II | 1 |
| MEE 427 | Mechanical Design I | 3 |
| or MEE 425 | Aerospace Design |  |
| MEE 431L | Multidisciplinary Engineering Design Laboratory I | 1 |
| MEE 432L | Multidisciplinary Engineering Design Laboratory II | 3 |
| MEE 433 | Project Management \& Innovation | 1 |
| MEE 439 | Dynamic Systems \& Controls | 4 |
| or MEE 440 | Flight Vehicle Performance |  |
| MEE 460 | Engineering Analysis | 3 |
| MTH 168 | Analytic Geometry \& Calculus I | 4 |
| MTH 169 | Analytic Geometry \& Calculus II | 4 |
| MTH 218 | Analytic Geometry \& Calculus III | 4 |
| MTH 219 | Applied Differential Equations | 3 |
| PHL 103 | Introduction to Philosophy | 3 |
| PHY 206 | General Physics I-Mechanics | 3 |
| PHY 207 | General Physics II - Electricity \& Magnetism | 3 |
| REL 103 | Introduction to Religioius \& Theological Studies | 3 |
| Select one course from: |  | 3 |
| MEE 344 | Manufacturing Processes |  |
| MEE 401 | Aerodynamics |  |
| MEE 478 | Energy Efficient Manufacturing |  |
| Electives |  | 12 |
| Ethics elective ${ }^{1}$ |  | 3 |
| Math/Science elective ${ }^{1}$ |  | 3 |
| MEE electives ${ }^{1}$ |  | 6 |
| Open electives ${ }^{1}$ |  | 6 |
| Total Hours |  | 132 |

1 Select from list approved by the Mechanical and Aerospace Engineering Department.

## Concentration in Aerospace Engineering (AEC)

This concentration is open only to mechanical engineering majors. The program provides a strong background for career specialization in the fields of aircraft and aerospace engineering.

| $\begin{aligned} & \text { MEE } 225 \\ & \text { (p. 390) } \end{aligned}$ | Intro to Flight | 3 |
| :---: | :---: | :---: |
| $\text { MEE } 401$ (p. 390) | Aerodynamics | 3 |
| MEE 409 <br> (p. 390) | Aerospace Structure | 3 |


| MEE 425 <br> (p. 390) | Aerospace Design | 3 |
| :---: | :---: | :---: |
| MEE 440 <br> (p. 390) | Flight Vehicle Perf | 4 |
| Select one course from: |  | 3 |
| MEE 413 <br> (p. 390) | Propulsion |  |
| Approved graduate AEE course |  |  |
| Total Hours |  | 19 |

## Concentration in Energy Systems Mechanical (MRS)

This concentration is open to all engineering students.
Select three courses from: 9

| ASI 320 | Cities and Energy |
| :--- | :--- |
| (p. 390) |  |
| CEE 390 <br> (p. 390) | Envr Pollutn Cntrl |
| CEE 434 <br> (p. 390) | Water \& Waste Engr |
| ECO 435 <br> (p. 390) | Eco of Environmnt |
| PHL 321 <br> (p. 390) | Environmental Ethics |
| PHY 220 <br> (p. 390) | Energy \& Env Physics |
| POL 371 | Environmental Policy |
| (p. 390)  <br> SEE 301 Glbl Chng\&Erth Sys <br> (p. 390)  <br> SEE 401 Sustnblty Research I <br> (p. 390)  |  |

Any approved Arts and Science energy/sustainability related elective
Select three courses from: 9
AEE 565 Fundmntls-Combustion
(p. 390)
or MEE 565 Fund of Combustion
(p. 390)

AEE 566 Combustion Theory
(p. 390)

MEE 413 Propulsion
(p. 390)

MEE 420 Energy Effent Bldgs
(p. 390)

MEE 471 Des-Thermal Systems
(p. 390)

MEE 472 Des-Environment
(p. 390)

MEE 473 Renewable Energy Sys
(p. 390)

MEE 478 Energy Eff Manufact
(p. 390)

MEE 493 Honors Thesis
(p. 390)

MEE 511 Adv Thermodynamics

(p. 390) $\quad$| Any approved engineering energy/sustainability related elective |
| :--- | :--- |

## Minor in Aerospace Engineering (AAE)

This minor is open to chemical, civil, and mechanical engineering majors. The program provides a strong background for career specialization in the fields of aircraft and aerospace engineering.

| Select four courses from: | 12 |
| :--- | :--- |
| AEE 558 | Compu Fluid Dyn |
| (p. 390) |  |
| MEE 225 | Intro to Flight |
| (p. 390) |  |
| MEE 401 | Aerodynamics |
| (p. 390) |  |
| MEE 409 <br> (p. 390) | Aerospace Structure |
| MEE 425 | Aerospace Design |
| (p. 390) |  |
| MEE 440 <br> (p. 390) | Flight Vehicle Perf |
| MEE 413 | Propulsion |
| (p. 390) |  |
| Approved AEE related elective |  |
| Total Hours |  |

## Minor in Mechanical Systems (MES)

This area concentrates on the study of design and analysis as well as modeling and control of mechanical systems. The activities in this area include, but are not limited to, computer-aided design, kinematic synthesis and analysis, acoustics and structural dynamics, noise and vibrations control, system modeling and identifications, and dynamics systems and control.

Select four courses from: 12

| ECE 416 | Intro to Robotics |
| :--- | :--- |
| (p. 390) |  |
| ECE 545 | Automatic Control |
| (p. 390) |  |
| MEE 428 | Mech Design II |
| (p. 390) |  |
| MEE 430/530 | Biomechanical Engr |
| (p. 390) |  |
| MEE 434/537 | Mechatronics |
| (p. 390) |  |
| MEE 490 | Special Topics ${ }^{1}$ |
| (p. 390) |  |
| MEE 503 | Intro Continuum Mech |
| (p. 390) |  |
| MEE 519 | Analytical Dynamics |
| (p. 390) |  |
| MEE 520 | Theortcl Kinematics |
| (p. 390) |  |



| MEE 312L | 1 MEE 433 | 1 |
| :--- | :---: | ---: |
| EGM 303 | 3 MEE 410 | 3 |
| MEE 308 | 3 MEE 410L | 1 |
| MEE 415 | 0 Open Elect | 3 |
|  | $\mathbf{1 6}$ | $\mathbf{1 7}$ |
| Fourth Year |  |  |
| Fall | Hours Spring | Hours |
| Advanced REL (Satisfies | 3 Advanced HST (Satisfies | 3 |
| CAP Crossing Boundaries | CAP Crossing Boundaries) |  |
| Faith Traditions, Diversity |  |  |
| and Social Justice) |  | 3 |
| Art Study (Satisfies CAP Art | 3 MEE 432L |  |
| Study) |  | 3 |
| MEE 427 | 3 MEE 460 | 1 |
| MEE 431L | 1 MEE 416 | 3 |
| MEE 439 | 4 MEE Elect | 3 |
| MEE Elect | 3 Open Elect | $\mathbf{1 6}$ |
|  | $\mathbf{1 7}$ |  |

Total credit hours: 132

## Courses

MEE 101. Introduction to Mechanical Engineering. 0 Hours
Weekly meeting of first-semester, first-year mechanical engineering students. Orientation to engineering problem solving and team building through hands on applications.

## MEE 104L. Computer Graphics I. 1 Hour

Fundamentals of engineering graphics and the part that graphical communication plays in engineering. Introduction to computer aided design (CAD).
MEE 198. Research \& Innovation Laboratory. 1-6 Hours
Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## MEE 200. Professional Development Seminar. 0 Hours

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

## MEE 225. Introduction to Flight. 3 Hours

An introductory course designed to provide students with a basic understanding of the multitude of disciplines that comprise the aeronautical engineering profession. A background and brief history of flight are covered. Foundational knowledge of aerodynamics, propulsion, aerostructures, aircraft performance and aerospace vehicle design. Laboratory included. Prerequisite(s): PHY 206.

## MEE 227L. Computer Graphics II. 1 Hour

Advanced engineering graphics and graphical communication in engineering; introduction to project design. Prerequisite(s): MEE 104L.

MEE 298. Research \& Innovation Laboratory. 1-6 Hours Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## MEE 308. Fluid Mechanics. 3 Hours

An introductory course in fluid mechanics. Fundamental concepts including continuity, momentum, and energy relations. Control volume analysis and differential formulations. Internal and external flows in laminar and turbulent regimes. One-dimensional compressible flows. Prerequisite(s): EGR 202. Corequisite(s): MTH 219.

## MEE 312. Engineering Materials I. 3 Hours

Atomic structure, bonding, and arrangement in solids. Mechanical and physical properties of solids, phase equilibria, and processing of solids. Strengthening methods in solids, principles of material selection, and characteristics of non-ferrous alloys, polymers, ceramic composites, and construction materials. Corequisite(s): EGM 303; MEE 312L.

## MEE 312L. Materials Laboratory. 1 Hour

Conducting mechanical and physical tests on solids including, but not limited to tension, compression, bending, hardness, and impact. Metallographic examination of surfaces. Test standards, data reduction, analysis, interpretation, and written and oral communication of test results. Corequisite(s): EGM 303; MEE 312.

## MEE 314. Computational Methods. 3 Hours

Detailed introduction to solving engineering problems through programming in the Matlab technical computing software package. Fundamentals of algorithms, including iterative processes, arrays and logic operations. Graphing of 2D and 3D functions. Graphical user interfaces. Focus on engineering applications that utilize the mathematical techniques of linear algebra, statistics and numerical methods. Corequisite(s): MTH 219.

## MEE 321. Theory of Machines. 3 Hours

Applications and design of mechanisms; use of graphical and analytical techniques for the kinematic and dynamic analysis and synthesis of machines. Analysis and design of cams, gears and gear trains. Balancing of rotating masses. Corequisite(s): EGM 202.

## MEE 341. Engineering Experimentation. 3 Hours

Basic sensors and instrumentation, design of experiments, data acquisition and processing, and uncertainty and statistical analysis of data. Measurement of strain, motion, pressure, temperature, flow and sound. Measurement applications to engineering phenomena or systems. Course will utilize a mix of lecture, laboratory experiments, and demonstrations. Also a term project to provide design of experiment experience. Corequisite(s): EGM 303; MEE 308.

## MEE 344. Manufacturing Processes. 3 Hours

Casting processes including casting defects and design of castings; metal working processes such as extrusion, forging, rolling and wire drawing; sheet metal forming; welding processes; powder metallurgy and design principles for P/M parts, metal removal processes; forming and shaping plastics and composite materials; rapid prototyping. Design principles for manufacturability. Includes laboratory. Prerequisite(s): MEE 312.

## MEE 398. Research \& Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## MEE 401. Aerodynamics. 3 Hours

Fundamentals of steady, incompressible, and inviscid aerodynamic flows over wings. Emphasis on force and moment determination for air foil and finite wings. Prerequisite(s): MEE 308.

## MEE 409. Aerospace Stuctures. 3 Hours

Structural properties of wing and fuselage sections. Nonsymmetrical bending of skin-stringer wing sections. Shear stresses in thin-walled and skin-stringer multiple-celled sections. Deflection by energy methods. Introduction to finite element stiffness method. Prerequisite(s): EGM 303.

## MEE 410. Heat Transfer. 3 Hours

Fundamentals of conduction, convection, and thermal radiation energy transfer. Conduction of heat in steady and unsteady state. Principles of boundary layer theory applicable to free and forced convection heat transfer for internal and external flows. Radiation analysis with and without convection and conduction. Prerequisite(s): MEE 308.

## MEE 410L. Thermo-Fluids Laboratory. 1 Hour

Hands-on opportunities for students to gain knowledge of instrumentation used for temperature, flow, heat, and pressure measurement and to visualize thermo-fluids phenomena in a rich problem solving context. Phenomena to be studied include: boundary layer and separation phenomena, internal flow characteristics, hydraulics, conduction, convection, and combustion. Corequisite(s): MEE 410.

## MEE 413. Propulsion. 3 Hours

Principles of propulsive devices, aerothermodynamics, diffuser and nozzle flow, energy transfer in turbo-machinery; turbojet, turbo-fan, prop-fan engines; turbo-prop and turboshaft engines. RAM and SCRAM jet analysis and a brief introduction to related materials and air framepropulsion interaction. Prerequisite(s): MEE 308.

## MEE 415. Professional Development I. 0 Hours

Presentations on contemporary mechanical engineering subjects by students, faculty, and engineers in active practice; student involvement in professional and service activities. Registration required of all MEE juniors.

## MEE 416. Professional Development II. 1 Hour

Presentations on contemporary mechanical engineering subjects by students, faculty, and engineers in active practice; student involvement in professional and service activities. Registration required of all MEE seniors.

## MEE 417. Internal Combustion Engines. 3 Hours

Combustion and energy release processes. Applications to spark and compression ignition, thermal jet, rocket, and gas turbine engines. Emphasis on air pollution problems caused by internal combustion engines. Idealized and actual cycles studied in preparation for laboratory testing of I. C. engines. Prerequisite(s): EGR 202 or permission of instructor.

MEE 420. Energy Efficient Buildings. 3 Hours
Provides knowledge and skills necessary to design and operate healthier, more comfortable, more productive, and less environmentally destructive buildings. A specific design target of $\mathrm{E} / 3$ (typical energy use divided by three) is established as a goal. Economic, thermodynamic, and heat transfer analyses are utilized. Extensive software development. Prerequisite(s): MEE 410.

## MEE 425. Aerospace Design. 3 Hours

Capstone Air Vehicle Design project that involves both individual and team-based conceptual and preliminary design and sizing. This course integrates the knowledge acquired from the disciplinary subjects already taken (aerodynamics, aerospace structures, propulsion, flight dynamics and intro to flight) in order to size an air vehicle based on a set of requirements. Prerequisite(s): (MEE 225, MEE 401, MEE 409) or permission of instructor. Corequisite(s): MEE 431L.

## MEE 427. Mechanical Design I. 3 Hours

Stress and deflection analysis of machine components; theories of failure; fatigue failure of metals. Design and analysis of mechanical components such as gears, shafts, bearings and springs. Prerequisite(s): EGM 303; MEE 321. Corequisite(s): MEE 431L.

## MEE 428. Mechanical Design II. 3 Hours

Advanced topics in stress and deflection analysis; analysis and design of mechanical elements such as gears, journal and ball bearings, belts, brakes, and clutches; principles of fracture mechanics; failure analysis; machinery construction principles. Contemporary design methods and issues associated with the product development cycle. Prerequisite(s): MEE 427.

## MEE 430. Biomechanical Engineering. 3 Hours

Application of engineering principles to clinical, occupational, and sports biomechanics topics. The course focuses on biomechanical analysis, particularly kinematics and kinetics of human movement, with emphasis on both research and product design.
MEE 431L. Multidisciplinary Engineering Design Laboratory I. 1 Hour Multidisciplinary team design projects applying general mechanical engineering knowledge. Product development using product realization process (PRP) including: proposal development; design specifications, conceptualization and decision analysis. Projects normally result in a final design and prototyping in a follow-on course. Projects supplemented with an introduction to mechanical components and Computer Aided Engineering (CAE) methods. Corequisite(s): MEE 425 or MEE 427.

## MEE 432L. Multidisciplinary Engineering Design Laboratory II. 3 Hours

One hour lecture and five hours of lab per week. Focus of the lecture is on engineering project management, including communication, collaboration, project tracking methods, cost estimating, overhead, direct labor, time value of money, depreciation and return on community based sponsors. Detailed evaluation of the Product Realization Process focusing on conceptual design, embodiment design, final design and prototyping. Analysis of the design criteria for safety, ergonomics, environment, cost and sociological impact. Periodic oral and status reports. Culminates in a comprehensive written report and oral presentation. Prerequisite(s): MEE 425 or MEE 427.
MEE 433. Project Management \& Innovation. 1 Hour Introduces students and teams to project management, entrepreneurship, and innovation. Topics include project management,cost estimating, time value of money, patent law, marketing, finance, and business plan development. Prerequisite(s): Junior status.

## MEE 434. Mechatronics. 3 Hours

Emphasis on the integration of sensors, micro-controllers, electromechanical actuators, and control theory in a 'smart' system for a semester long design project. Topics include: sensor signal processing, electromechanical actuator fundamentals, interfacing of sensors and actuators to micro-controllers, digital logic, and programming of microcontrollers, programmable logic controllers and programmable logic devices. Equal mix of lecture and laboratory. Prerequisite(s): ECE 323.

## MEE 438. Robotics \& Flexible Manufacturing. 3 Hours

Overview of industrial robots; physical configuration, operation, and programming of robots; actuators, drive mechanisms, sensors, vision systems, controls, and control methods for robots; economic considerations; and automated factory concept. Prerequisite(s): MEE 321.

## MEE 439. Dynamic Systems \& Controls. 4 Hours

Dynamic systems modeling with special emphasis on mechanical systems (one and two degrees of freedom). Covers both transfer function and state space modeling techniques. Analogues drawn between mechanical, electrical, fluid, and thermal physical domains. System nonlinearities and model linearization methods are discussed. Analytical solutions of linear ordinary differential equations using Laplace transformation and state space theory. Feedback control theory, including root locus and frequency response techniques. Prerequisite(s): EGM 202; MTH 219.

## MEE 440. Flight Vehicle Performance. 4 Hours

This course is intended to introduce the student to the flight mechanics of aerospace vehicles. Some familiarity with aircraft performance, static stability and control is assumed, but not required. We will use modern analysis methods to develop the topical details including: 1) a study of aerodynamics involved in-flight vehicle motion to obtain an understanding of influence coefficients; 2) use of linear algebra to develop a rational approach to modeling aircraft dynamics; 3) an introduction to modern control theory methodology; and 4) problems and examples that illustrate the use of desktop computational tools currently available. Prerequisite(s): (EGM 202; MEE 401, MEE 225; MTH 219) or permission of instructor.

## MEE 460. Engineering Analysis. 3 Hours

Case study approach to engineering problem solving. Emphasis on breaking down problems to tractable parts, modeling physical systems and selection of solution techniques. Problems related to thermal, fluid, structural, and dynamic systems. Problems typically involve solution of ordinary and partial differential equations, Fourier analysis of periodic behavior, simulation, optimization and/or statistical analysis. Analytical and numerical solution techniques, with an emphasis on selecting the most appropriate technique and understanding the limitations of the analysis. Prerequisite(s): MEE 410.

## MEE 471. Design of Thermal Systems. 3 Hours

This course integrates thermodynamics, heat transfer, engineering economics, and simulation and optimization techniques in a design framework. Topics include design methodology, energy analysis, heat exchanger networks, thermal-system simulation and optimization techniques.

## MEE 472. Design of Environment. 3 Hours

Emphasis on design for environment over the life cycle of a product or process, including consideration of the mining, processing, manufacturing, use, and post-life stages. Course provides knowledge and experience in invention for the purpose of clean design, life cycle assessment strategies to estimate the environmental impact of products and processes, and cleaner manufacturing practices. Course includes a major design project.

## MEE 473. Renewable Energy Systems. 3 Hours

Introduction to the impact of energy on the economy and environment. Engineering models of solar thermal and photovoltaic systems. Introduction to wind power. Fuel cells and renewable sources of hydrogen.

## MEE 478. Energy Efficient Manufacturing. 3 Hours

This course presents a systematic approach for improving energy efficiency in the manufacturing sector. Current patterns of manufacturing energy use, the need for increased energy efficiency, and models for sustainable manufacturing are reviewed. The lean-energy paradigm is applied to identify energy efficiency opportunities in industrial, electrical, lighting, space conditioning, motor drive, compressed air, process heating, process cooling, and combined heat and power systems. Prerequisite(s): (EGR 202 or equivalent) or permision of instructor.
MEE 490. Special Topics in Mechanical \& Aerospace Engineering. 3 Hours
Particular assignments to be arranged and approved by the department chairperson.

## MEE 493. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

## MEE 494. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): MEE 493.
MEE 498. Research \& Innovation Laboratory. 1-6 Hours Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

## MEE 499. Special Problems in Mechanical \& Aerospace Engineering. 1-6 Hours <br> Particular assignments to be arranged and approved by department chairperson.

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[^0]:    - Option 1-A, A-, B+, B, B-, C+, C, C-, D, F
    - Option 2-S/NC-Satisfactory (C- or higher)/No Credit (D, F)

[^1]:    1 Completed with ASI 110 and ASI 120.
    2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
    3 Completed with ENG 200 H or ASI 120.

[^2]:    1 Other courses may be selected with approval.

[^3]:    1 Completed with ASI 110 and ASI 120.
    2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
    3 Completed with ENG 200H or ASI 120.

[^4]:    CPS 111 Intro-Personal Comp
    (p. 240)

[^5]:    1 Approved by the department chairperson.

