## valparaiso university

$2017-2018$

## General Catalog



## Mission Statement

> Valparaiso University,
> a community of learning dedicated to excellence and grounded in the Lutheran tradition of scholarship, freedom, and faith, prepares students to lead and serve in both church and society.

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ANNOUNCEMENTS FOR 2017-2018 SESSIONS
VALPARAISO UNIVERSITY BULLETIN
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The General Catalog of Valparaiso University is designed to describe the programs of the University and to give that information needed to guide students in the successful achievement of their academic goals. Nevertheless, the material is for information only and does not make a contract between the student and the University. Students themselves are ultimately responsible for completion of the requirements for their degrees as well as for the value they receive from University programs.

The relationship between the University and its students is not custodial in nature. There is no special relationship with the University created by a student's enrollment. The University does not assume any duty toward any student that is not otherwise required by operation of law or by the terms of this catalog.

In years when the General Catalog is not published, an announcement bulletin gives information on important changes in courses, calendar, staff, program and policies. The University reserves the right to discontinue an academic program if it is deemed no longer central to the University's mission.

Separate catalogs are issued for the Law School and the Graduate School which should be consulted for details about the related programs.

## Statement on Equality of Opportunity

Valparaiso University provides equality of opportunity to its applicants for admission, enrolled students, graduates, and employees. The University does not discriminate with respect to hiring, continuation of employment, promotion and tenure, other employment practices, applications for admission, or career services and placement on the basis of race, color, gender, age, disability, national origin or ancestry, sexual orientation, or (as qualified herein) religion. An institution committed to its Lutheran tradition, the University reserves its right to promote the teaching of the church and to exercise preferences in admissions and employment-related practices in favor of Lutherans.

## Graduation Rate of Entering Freshmen

The graduation rate for all students entering Valparaiso University as first-time freshmen during the 2010-2011 academic year was $65.7 \%$. This graduation rate represents the percentage of students entering Valparaiso University as first-time (i.e., new) fulltime degree-seeking freshmen during the 2010 Summer and Fall semesters who subsequently were awarded baccalaureate degrees by Valparaiso University within six calendar years (i.e., through August 2016).


## University Calendar for 2017-2018

For the Colleges of Arts and Sciences, Business, Engineering, and Nursing and Health Professions. For the Law School, consult the Law School Bulletin.

Full Summer 2017

| May 23 | Tuesday | Instruction begins |
| :--- | :--- | :--- |
| May 23 | Monday | Deadline to drop/add classes |
| May 27 | Friday | Deadline to file for S/U |
| May 29 | Monday | Memorial Day - No classes |
| July 4 | Tuesday | Independence Day - No classes |
| July 22 | Friday |  |
| August 11 | Friday |  |
| August 14 | Monday | $12: 00 \mathrm{pm}$ |

Summer I 2017

| May 23 | Tuesday | Instruction begins |
| :--- | :--- | :--- |
| May 20 | Friday | Deadline to drop/add classes |
| May 24 | Tuesday | Deadline to file for S/U |
| May 29 | Monday | Memorial Day - No classes |
| June 10 | Friday |  |
| June 30 | Friday |  |
| July 3 | Monday | $12: 00 \mathrm{pm}$ |

Summer II 2017

| July 3 | Monday | Instruction begins |
| :--- | :--- | :--- |
| June 30 | Thursday | Deadline to drop/add classes |
| July 4 | Tuesday | Independence Day - No classes |
| July 8 | Friday | Deadline to file for S/U |
| July 22 | Friday |  |
| August 11 | Friday |  |
| August 14 | Monday | $\mathbf{1 2 : 0 0 ~ p m}$ |

Fall Semester 2017

| August $\mathbf{1 9}$ | Friday |  | Fall FOCUS registration for new students who did not participate in summer <br> FOCUS registration |
| :--- | :--- | :--- | :--- |
| August $\mathbf{1 9}$ | Saturday | 8:00 am | Fall Welcome orientation for freshmen begins |
| August $\mathbf{2 2}$ | Tuesday |  | Instruction begins |


| October 20 | Friday | 5:00 pm | Deadline for adding second half short courses |
| :---: | :---: | :---: | :---: |
| October 20 | Friday | 5:00 pm | Deadline to file for S/U grade for second half short courses |
| October 24 | Tuesday | 5:00 pm | Deadline for withdrawing from regular courses with grade of W |
| October 27 - October 29 |  |  | Family Weekend |
| November 14 | Monday | 5:00 pm | Deadline for withdrawing from second half short courses with grade of W |
| November 18 - November 26 |  |  | Thanksgiving recess - No classes |
| December 2 | Friday |  | Last day for tests in courses of 3 credits or more. Last day to petition for change in date of final examinations |
| December 9 | Friday | 5:00 pm | Deadline to officially withdraw from the University for Fall Semester. Last day to file petitions to change registration |
| December 8 | Friday |  | Instruction ends |
| December 9 | Saturday |  | Reading day |
| December 10 | Sunday |  | December Commencement Ceremony |
| December 11 | Monday |  | Final examinations begin |
| December 15 | Friday | 5:30 pm | Final examinations end. Semester ends |
| December 18 | Monday | 12:00 pm | Deadline for reporting all grades |

Spring Semester 2018

| January $\mathbf{8}$ | Monday |  | Orientation and registration for new students begins |
| :--- | :--- | :--- | :--- |
| January $\mathbf{8}$ - | March $\mathbf{2}$ | Dates for first MBA term |  |

## Valparaiso in Brief

## The Aims of the University

Valparaiso University is dedicated to superior teaching based on excellent scholarship. As a scholarly community it actively engages in the exploration, transmission and enlargement not only of knowledge but also of the cultural and religious heritage of human society, and it is proud to prepare men and women for professional service. This community values respect for learning and truth, for human dignity, for freedom from ignorance and prejudice, and for a critically inquiring spirit. The University aims to develop in its members these values, together with a sense of vocation and social responsibility. It holds that these values receive their deepest meaning and strength within the context of the Christian faith.

These basic commitments enable Valparaiso University to graduate students whose individual achievements and aspirations are linked invariably to larger social, moral, and spiritual horizons of meaning and significance. Proud of all its alumni who have carried its values into leadership roles in their communities, the church, social institutions, the nation, and the world, it aims to continue graduating such potential leaders.

## A Distinctive Institution

All American colleges and universities bear a family resemblance to one another as they come from a common set of ancestors in Europe and colonial America. Within that larger family, Valparaiso University belongs to a small and distinctive group. It is neither a large research university nor a small liberal arts college. At the same time that it promotes a basic liberal arts curriculum, it features strong undergraduate colleges of Engineering, Nursing and Health Professions, and Business, a professional direction lacking in the conventional liberal arts college. Conversely, the University is not a cluster of professional colleges which merely pays lip service to the liberal arts. Education in the liberal arts is the foundation of every academic program, and the College of Arts and Sciences, the largest unit in the University, carries on many vital programs of its own.

This combination of liberal and professional studies of such variety within an institution of modest size is rare in American higher education. Broad enough in curriculum and in variety of programs to be a university, still Valparaiso University emphasizes undergraduate teaching in the manner of the traditional small college, with many small classes and strong individual guidance. Valparaiso University is also a founding member of the New American Colleges and Universities, a national consortium of small to mid-sized colleges and universities that are committed to the ideal of integrating liberal and professional studies.

Valparaiso University's unique status as an independent Lutheran university supplies the rationale for this special combination of liberal and professional studies. No church body has control or authority over the University, which is owned and operated by the Lutheran University Association. Valparaiso University is therefore both free and responsible to realize an educational ideal informed by the best traditions of Lutheran Christianity and of liberal and professional studies.

## Faith and Learning

The University's concern for the personal and intellectual development of each student is rooted in its Lutheran heritage. This Christian philosophy of education guides both the design of its curriculum and the approach to learning that it fosters. Beyond the courses in theology that the curriculum provides, the University emphasizes a Christian freedom that liberates the scholar to explore any idea and theory, a vocation freely uniting faith and intellectual honesty. In its residential life the University leads students to accept personal responsibility for their development and encourages a sense of caring for one another. Standing together at the center of the campus, the Chapel of the Resurrection and the Christopher Center for Library and Information Resources express the University's belief in the creative relationship between faith and learning. The University's motto, too, points up this relationship: In luce tua videmus lucem, "In Thy light we see light."

The chapel is the focal point for worship, the proclamation of the Gospel, and many cultural events. Both Sunday and daily services bring together members of the University community who choose to worship together. Students and professional chapel staff offer a broad and creative ministry to the whole community. As the University welcomes students of varied denominations and religious traditions, so it welcomes the involvement of community churches in those students' lives. A Roman Catholic student center, for example, is located next to the campus, and some churches of other denominations offer transportation to their services in the town.

## The Setting of the University

The spacious campus of 320 acres contains more than sixty academic and residential buildings, many of them built within the past two decades. The campus is located in the small city of Valparaiso, attractively situated in a rural setting at the edge of the busy industrial district of Northwest Indiana. Fifteen miles to the north, on the shore of Lake Michigan, are the Indiana Dunes. The city of Chicago with its vast cultural resources, an hour's drive from the campus, can be reached easily by train and bus. The University
often charters buses so that students and faculty can take advantage of the theatres, museums, and other educational benefits of this great city. Many programs of the University use the region--rich in natural, urban, and industrial opportunities for field trips and investigative activities.

## An Unusual History

In its 150 year history, the University has passed through three distinct phases. Begun by Methodists in 1859 as an institution pioneering in coeducation, the Valparaiso Male and Female College was forced by the reverses of the Civil War to close its doors in 1871. It was revived in 1873 by an enterprising educator, Henry Baker Brown, as the Northern Indiana Normal School. "Mr. Brown's School," a flourishing private, proprietary institution, was renamed Valparaiso College in 1900 and rechartered as Valparaiso University in 1907. During the next twenty years, it won national recognition as a low-cost, no-frills institution of higher learning which served thousands of students who might not otherwise have been able to afford a good education. Many alumni from this period achieved distinction in their fields as governors, legislators, scientists, business leaders, and other professionals. However, after World War I the University went into decline and bankruptcy; then, in 1925, The Lutheran University Association purchased it, beginning the modern phase of the University's history. The association, an Indiana corporation composed of men and women, the majority of whom are affiliated with Lutheran congregations, is a national organization whose members represent the principal regions of the United States.

## Profile of Students and Faculty

The heart of an academic institution is its students and faculty. Valparaiso University's student body is selected from a large number of applicants from all states in the nation and from many foreign countries. Unlike most American colleges, which draw the majority of their students from their immediate location, Valparaiso University enrolls $42 \%$ of its undergraduate students from Indiana; another $48 \%$ of undergraduates come from Great Lakes states. Major contingents come, too, from both East and West coasts. National and diverse in its student body, the University is still a distinctively Midwestern institution which enjoys the friendliness and hard work characteristic of the region. Over $57 \%$ of the students come from the upper fifth of their high school graduating classes. Approximately twenty National Merit Scholars are enrolled at the University in any given year.

A rich diversity characterizes the University faculty ( 312 full-time and 102 part-time professors), but they share important skills and attitudes as well. Educated at leading research universities, they are competent in their fields. They care about students, an attitude made visible by the frequent individual consultations they invite. Above all, they enjoy teaching and believe that their work enriches not only their students' but their own lives. At Valparaiso University there are no teaching assistants; senior faculty members and newcomers alike can be found teaching introductory and advanced courses. The University embodies in its faculty an ideal of the teacher-scholar, one who recognizes that teaching is based on continuing scholarship. Many members of the faculty have achieved significant reputations in their particular fields and are pursuing, with marked success, grants from government and private foundations to promote research and improve instruction. In addition to The Cresset, a periodical review of literature, the arts and public affairs, published by the University, faculty edit from the campus two other national learned journals.

University governance, too, reflects campus-wide involvement. Through the University Council, composed of faculty, students, administrators, and staff, students share in the development of University policy, including academic programs. Final responsibility for all academic programs, especially those which require certification, is vested in the faculty.

The modest size of the University, its organization into five small undergraduate colleges, a school of law, and a school of graduate studies and continuing education, and especially the strong personal commitment of the faculty enhance its teaching effectiveness. In a school like this, with its concentrated residential focus and the immediate relationships it fosters between faculty and students, educational life is more vital and more intense than would be possible at massive institutions or at commuter colleges. Valparaiso University consciously fosters this tradition in the selection of both its students and its faculty and in the development of its educational programs.

## Academic Programs

## The Goals of Education at Valparaiso University

While appreciating the importance of preparing students for useful careers, Valparaiso University holds to the ideal that its students want an education which treats them first as human beings rather than simply as future wage earners. These students want to think clearly, to analyze facts and ideas, to draw sound conclusions from their reasoning and to express themselves clearly and creatively. They want to understand their cultural and religious heritage, developing a sensitivity to the culture and the viewpoints of others, while finding for themselves firm values and standards by which to live and make judgments. They want to become humane and responsible citizens in an ever changing society and to participate effectively in their institutions and communities.

There is no simple formula for acquiring these abilities. Every degree program at Valparaiso University aims to assist students to attain these goals by offering a course of studies in general education which provides students with a broad base of knowledge and abilities, as well as in a particular area which leads to the mastery of concepts and tools of a single field of study. Both components, general education and the major field of studies, develop abilities in the student which go far beyond mere career preparation and provide intellectual enrichment for a lifetime.

## University-Wide Student Learning Objectives

Through the following student learning objectives, Valparaiso University affirms its mission-based commitment to educate responsible global citizens who are ready to lead and serve church and society.

The Committee on Assessment has built these University-wide student learning objectives from the Mission Statement, the Strategic Plan, the work of the General Education Committee, and the assessment plans of all the colleges, departments, and programs.

These objectives are designed to help colleges and departments clearly link their student learning objectives to those of the University. All academic units will indicate how the learning outcomes of their curriculum and of individual courses within that curriculum link to some, or all, of the University-wide student learning objectives. The objectives are designed to include the cognitive, skill, and value domains of learning.

Students will:

1. Demonstrate theoretical and practical knowledge as well as the intellectual skills and creative capacities pertinent to their respective fields of study.
2. Solve both conceptual and applied problems by integrating broad-based knowledge, evidence-based reasoning, and informational literacy.
3. Practice experiential, interdisciplinary, and collaborative learning in both academic and co-curricular pursuits.
4. Communicate effectively in oral, written, and digital forms in increasingly complex contexts.
5. Engage in cross-cultural dialogue and experiences with the requisite knowledge to succeed in a diverse, global community.
6. Develop character, integrity, and wisdom as they discern their vocations and prepare to ethically lead and serve church and society.

## Degrees

## Undergraduate Degrees

Associate of Arts
Associate of Science
Bachelor of Arts
Bachelor of Liberal and Professional Studies
Bachelor of Music
Bachelor of Music Education
Bachelor of Science
Bachelor of Science in Business Administration
Bachelor of Science in Bioengineering
Bachelor of Science in Civil Engineering

## Graduate Degrees

Doctor of Nursing Practice
Education Specialist
Master of Arts
Master of Arts in Liberal Studies
Master of Business Administration
Master of Education

> Bachelor of Science in Computer Engineering
> Bachelor of Science in Education
> Bachelor of Science in Health Care Leadership
> Bachelor of Science in Health Science
> Bachelor of Science in Electrical Engineering
> Bachelor of Science in Mechanical Engineering
> Bachelor of Science in Nursing
> Bachelor of Science in Physical Education
> Bachelor of Science in Public Health
> Bachelor of Social Work

Master of Health Administration
Master of Ministry Administration
Master of Public Health
Master of Science
Master of Science in Nursing

Law Degrees
Juris Doctor
Master of Laws

## Requirements and Flexibility

Each degree entails a set of requirements which are specified at appropriate places in this bulletin. These requirements are designed to give structure to each student's education while affording the greatest possible freedom to design an individual academic program. Elsewhere in this bulletin are descriptions of a number of ways by which the University encourages further flexibility and individuality.

## An Overview of General Education Requirements at Valparaiso University

These requirements vary somewhat in different degree programs, particularly in the professional colleges. These variations are described in the more detailed presentation of degree requirements elsewhere in this catalog.

1. Freshman Studies
(taken during the freshman year)
The Human Experience, two semesters
2. Academic Area Studies

Writing Intensive: at least one course (sophomore standing recommended)
Theology: two courses (one in the junior or senior year)
Cultural Diversity: Foreign Language: (two courses) and a Cultural Diversity course
Humanities: two courses, one each from two areas-Fine and Performing Arts, History, Literature, Philosophy
Social Science: two courses, one each from two different areas of study
Natural Science: two courses, one each from two different areas of study
Quantitative Analysis: one course
Kinesiology: one credit hour

## Summary of the Academic Fields of Study at the University

Most of the fields of study listed below are available as majors and minors or as interdisciplinary programs. A few are available only as minors. Some fields offer further specialized concentrations within the major itself.

## College of Arts and Sciences

Actuarial Science
American Indian Studies Minor
American Studies
Art
Astronomy
Biochemistry
Biology
Chemistry
Chinese and Japanese Studies
Chinese Minor
Classics
Communication
Computer Science
Creative Writing
Criminology
Digital Media
Data Science
Elementary Education (Grades K-6)
English
Environmental Science
Exercise Science
French
Geography
German
Global Service
History
Christ College
Christ College Scholar Honors Program
Humanities

## College of Business

Accounting
Business Analytics
Entrepreneurship Minor
Finance

## College of Engineering

Bioengineering
Civil Engineering
Computer Engineering
College of Nursing and Health Professions
Health Care Leadership
Health Science
Nursing

International Economics and Cultural Affairs
International Relations
Japanese Minor
Latin American/Latino Studies
Mathematics
Meteorology
Middle East Studies
Music
Music Education
Philosophy
Physical Education
Physical Education Teacher Education
Physics
Political Science
Professional Writing
Psychology
Secondary Education (Grades 5-12)
Social Work
Sociology
Spanish
Sports Management
Statistics
Theatre
Theology
Theology and Ministry

International Business
International Business and Global Studies Minor
Management
Marketing

Electrical Engineering
Mechanical Engineering
Humanitarian Engineering Minor

Public Health
B.S.N. completion program for R.N. students

Accelerated B.S.N. degree option

## Interdisciplinary Programs

Applied Statistics Minor
Aviation Minor
Business Administration Minor
Business Analytics Minor
Cinema and Media Studies Minor
Environmental Studies Minor
Ethnic Studies Minor
Forensic Science Minor

Fundamentals of Business
Gender Studies Minor
Human Aging Minor
Neuroscience Minor
Peace and Social Justice Studies Minor
Philanthropic Leadership and Service Minor
Urban Studies Minor

Programs of the Law School and the Graduate School are described in separate catalogs.

## The Freshman Year

Even though they may express clear-cut decisions, college freshmen are often uncertain about their long-range career goals. The University fosters this openness by encouraging them to discover new interests while cultivating their current ones. All students, with the help of their academic advisors, design a program that allows them first to explore various areas of interest and, in due time, to develop a plan of study focusing on a major area of interest.

## The Valpo Core Course

The Valparaiso Core Course is a two-semester, ten credit course required of all first-year students not enrolled in the Christ College Freshman Program. The primary subject of this interdisciplinary course is the human experience as great thinkers, writers, and artists have represented it. The primary object of the course is to welcome and initiate new students into this University community and academic life generally, by putting them in dialogue with great teachers and great texts, and of course, with each other, to explore together some of the most essential aspects of human existence, past, present, and future.

The course is interdisciplinary because knowledge is interdisciplinary, and in the global community we now live in the world depends increasingly on people able to make connections across disciplines, across cultures, across oceans, across town. To prepare our students to succeed in this world and live meaningful lives of leadership and service, we recognize the need to introduce them to cultures and traditions other than their own. The reading list is multicultural and international because the world is multicultural and international. At the same time, we recognize the need to help students discover where they come from and where they are, which for the majority means exploring the Judeo-Christian intellectual tradition of the West, which produced, among other great things, this University. Hence, at the core of this Core Course, in the best spirit of Lutheran higher education, is the desire to create dialogues of texts and traditions, and to help our students grow in their understanding of how the past speaks to the present, how the sacred informs the secular.

First-year students need special skills to enter fully into this dialogue and become successful students in the fullest sense. The Valpo Core is designed to help students develop those skills necessary for them to thrive in their studies, skills in close reading and critical thinking, in speaking, and especially in writing. Great opportunities also exist in the course for students to become more adept at retrieving, evaluating, and managing information, as they hook up to the rest of the world through our electronic information services.

Because of the interdisciplinary nature of the Core Course, some institutions experience difficulties determining how to apply these credits toward their own general education requirements. CORE 110 may be distributed as 3 credits of English composition and 2 credits of philosophy/theology. CORE 115 may be distributed as 3 credits of non-U.S. History and 2 credits of philosophy/theology.

## Off-Campus Study Programs in the United States

## The Lutheran College Washington Consortium

Valparaiso University is a member of the Lutheran College Washington Consortium, sponsored by a group of thirteen Lutheran colleges and universities. Valpo juniors and seniors can study in the fall, spring, or summer in Washington, DC at the Lutheran College Washington Semester. In the fall and spring, students participate in a 4 day per week internship and take two LCWS classes. LCWS will help students find an internship, and students earn 15 credit hours for the semester. The program can accommodate almost any major. LCWS students have interned in almost every field - from agriculture to zoology (and everything in between). Valpo LCWS students have interned at the White House, State Department, the National Center for Missing and Exploited Children, CNN, Sirius XM Radio, the US Marshals Service, the DNC \& RNC, as well as think tanks, advocacy groups, and faith-based organizations.

Students register at Valparaiso University for the Washington Consortium Semester and pay to this University the tuition and fees. Expenses for travel and meals are paid directly by the students. The Washington Consortium Semester courses are accepted for full credit toward graduation from Valparaiso University.

For information on the Washington Consortium Semester see www.valpo.edu/lcws.

## New American Colleges and Universities Consortium

Valparaiso University is a member of the New American Colleges and Universities. The consortium is a national consortium of selective, small to mid-size ( $2,000-7,500$ students) independent colleges and universities similar in mission to Valparaiso University. Students can apply to study at any of the member institutions for a semester in programs of the student's choosing.

For detailed information, please refer to newamericancolleges.org

## Chicago Arts Program

The Chicago Arts Program is a 15 -week guide to the contemporary art world. In addition to attending a wide range of cultural events, students live in Chicago and meet and work with local artists and arts professionals on part-time internships and independent study projects, and in two courses, the core course, Negotiating the Art World, and an elective special topics seminar or studio course. Possible internship placements include in an artist's studio; in a museum or gallery; with a theatre or dance company; with an orchestra or presenting venue; with a magazine or newspaper, and more. Not limited to arts majors, the program benefits all students who have strong interests in the arts.

## Chicago Business, Entrepreneurship, and Society Program

The Business, Entrepreneurship, and Society Program in Chicago, offered in cooperation with the Associated Colleges of the Midwest, introduces the central themes of creativity, innovation, and problem solving as the fundamental tools of successful businesses and organizations of all types. The program challenges students to consider and apply these themes within the broader context of their experience living and working in Chicago as a major urban center. The program consists of 16 credit hours of coursework, which includes an internship with a local business or not-for-profit organization and a faculty-guided independent study project. Through their experiences living, working, and learning in Chicago, students will explore case studies of Chicago entrepreneurs, develop contacts with Chicago-based business leaders and entrepreneurs, learn to recognize entrepreneurial opportunities in everyday life, and deepen their knowledge of Chicago from a variety of perspectives.

Sophomores, juniors, and seniors are eligible to participate. The program is offered both fall and spring semesters.
Students register at Valparaiso University for the Chicago Business, Entrepreneurship, and Society Program and pay to this University the tuition and general fee. There is an additional fee for this program which is determined annually by the Associated Colleges of the Midwest. Expenses for travel and meals are paid directly by the students. Chicago Business, Entrepreneurship, and Society Program courses are accepted for full credit toward graduation from Valparaiso University.

## Chicago Urban Semester

Through the College of Arts and Sciences and with the cooperation of the Associated Colleges of the Midwest, the University offers to all students a one semester program involving residence in Chicago. This program offers students 16 credit hours of instruction including closely supervised internships and independent study projects. Through the course work, students learn the magnitude and complexity of an urban environment by analyzing and experiencing the political, social, economic, and cultural forces shaping a city. For descriptions of courses and grading policies refer to page 382 . Sophomores, juniors, and seniors are eligible to participate. The program is offered both fall and spring semesters.

Students register at Valparaiso University for the Chicago Urban Semester and pay to this University the tuition and general fee. There is an additional fee for this program which is determined annually by the Associated Colleges of the Midwest. Expenses for travel and meals are paid directly by the students. Chicago Urban Semester courses are accepted for full credit toward graduation from Valparaiso University.

## Cooperative Education Program

Cooperative education is an academic program which combines professional work experience with academic coursework. Paid employment occurs in business, industry, government, or other professional settings. The Cooperative Education experience is available in the Colleges of Arts and Sciences (page 63), Business (page 295), Engineering (page 320), and Nursing and Health Professions (page 354).

All students in good standing who meet the grade point minimum declared by the particular college may participate in the program. Students may enroll in full-time (called alternating) or part-time (called parallel) programs, except in the College of Engineering where only the alternating program is available. Academic credit for Cooperative Education is granted by the college or participating department in which the student is enrolled. The number of co-op credits counted toward a major or a degree varies
by college or department. Students should consult with faculty co-op coordinators to determine how co-op credits may apply to majors and/or degree requirements.

The Cooperative Education Program enriches the total education of students by providing the opportunity to increase their sense of responsibility, judgment, and self-confidence through off-campus experiences that are closely integrated with their academic studies.

Students are considered to be continuing full-time students of the University while on co-op assignment.

## Other Academic Opportunities

## Internships

A number of internship opportunities have been established in several departments in the College of Arts and Sciences, in the College of Business, and in the College of Engineering. Some of these are optional, others are required. These internships allow students to learn by direct experience under the supervision of a professional. Further information is given in departmental descriptions.

## Service Learning

Service learning is a credit based educational experience in which students participate in an organized service activity that meets identified community needs. Students reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility. Service learning provides an additional means for reaching educational objectives, and academic credit is appropriate for service activities when learning objectives associated with the service are identified and evaluated.

Unlike extracurricular voluntary service, service learning is a course-based service experience that produces the best outcomes when meaningful service activities are related to course material through reflection activities such as writing and small group discussions. Unlike practica and internships, the experiential activity in a service learning course is not necessarily skill-based within the context of professional education.

Guidelines for courses with a service learning component are as follows:

1. Courses should contain the equivalent of one to two hours per week of the service learning component.
2. A reasonable variety of service agency placements should be provided for each course.
3. Any given course may contain a service learning component; these courses will be designated as such in the current course schedule.
4. Students may be required to use their personal vehicles for travel to off-campus service sites. If off-campus work is required, students will sign a liability waiver.

## Honors Work and Independent Study

The University encourages honors work and independent study. Each college has its own approach to this form of instruction. Information should be sought from deans or department chairs. Especially interesting is an opportunity for a group of students to develop a topic or area of studies to be approached as a group under the sponsorship of a faculty member. This independent group study program is administered through the dean of the College of Arts and Sciences but is open to all students. More detailed information is given on page 63.

## Christ College

This college is itself one of the special educational opportunities available to all students of the University. It is an honors college which offers honors courses, special integrated courses, and seminars which probe topics of interest not normally found in a single department. The college has a core community of students who follow a special course of studies in the area of general education but welcomes all students to inquire into its programs and to participate in it. Details are given beginning on page 287.

## Summer Sessions

The summer program serves a variety of undergraduate and graduate students. Regularly enrolled Valparaiso University students use the Summer Sessions to assist in completing additional majors or minors, distribute their academic load, accelerate their studies, or take maximum advantage of educational opportunities. Visiting students from other accredited institutions take courses for transfer to their home institution.

Newly admitted students (freshmen, transfers, and graduates) may begin their work during the summer. Selected high school students may take courses to facilitate their educational objectives.

The University offers one twelve-week and two six-week sessions. Although most courses are six weeks, within each six-week term usually a number of specialized courses are offered in shorter periods of time. The first of the two six-week terms begins
immediately after May Commencement. Students may earn up to seven credits in each six-week session and a total of 14 for the summer, the equivalent of a semester's work.

Within each six-week term, a number of shorter courses with special pedagogical requirements are offered. Typically these last two or four weeks and usually involve field trips, field study (including international travel), and immersion experiences which use films, videos, or laboratories. Students normally may not take any other courses while taking a short course.

## Graduate School Early Entry Program

Through the Graduate School Early Entry Program, undergraduates with junior standing and a GPA of at least 3.0 may apply for provisional admission to an eligible graduate degree program. If accepted, the student may take courses from the graduate catalog up to a maximum number of credits established by the graduate program, generally during the senior year, and apply them to his or her undergraduate degree. These credits may be used as undergraduate electives, or to complete a specific undergraduate program of study. In the latter case, the specific substitution of a graduate course for an undergraduate course is given in the description of the undergraduate program. During the senior year the student will work with both an undergraduate advisor and a graduate program advisor to coordinate the course articulations.

Pending final acceptance to the graduate program in the student's senior year, after the student matriculates to the Valparaiso University Graduate School, graduate credits earned while an undergraduate may be used in partial fulfillment of graduate degree program requirements. This reduces the cost and time required to earn the graduate degree. In some cases, two different degrees that would normally take $4+2$ years to complete, if planned correctly, may be completed in $4+1$ years. The graduate program specifies the limits on the number of graduate credits that may be applied to an undergraduate degree, but generally no more than half of the credits for a graduate program may be applied to both programs. All undergraduate students interested in the Early Entry program should apply during their junior year. See the Graduate Catalog for details.

Early Entry is different from two other accelerated programs where graduate coursework does not count for undergraduate study. In the first case, there are accelerated paired programs ( $3+2$ ), in which the student completes the bachelor's degree in three years and then enters the two year master's degree after passing a series of checkpoints specified by the graduate program. In the second case, under the Graduate School Early Admission program, a senior with nine or fewer hours remaining in the final semester may be provisionally admitted to a graduate program and may take up to twelve total semester hours of undergraduate and graduate courses combined. See the Graduate Catalog for details.

## Special Course, Program, and Activities Requirements

Some University courses, programs, or activities require students to travel to locations off campus. When the University does not provide the transportation, or when it does and the student elects not to use it, the student is solely responsible for making his or her own safe and responsible travel plans.

Some University courses, programs, or activities also involve internship, practica, student teaching, and the like with third parties outside of the University. Some of these third parties, such as school districts or private sector employers, may require criminal, or similar background checks of the students. Each student must comply with these requests if he or she is to participate in the course, program, or activity.

## Lectures

Valparaiso University presents numerous lectures by scholars and public figures on topics of scholarly or current interest as an integral part of its academic program. Various endowed and named lectures are also presented each year, bringing distinguished men and women to the campus to address the University community.

The Walter E. Bauer Endowed History Lectureship Fund, established by the family and friends of Dr. Walter E. Bauer, is an annual History Department event to honor Dr. Walter E. Bauer.

Willis Boyd History Lectureship was established by the family and friends in honor of Professor Willis Boyd.
John Martin Gross and Clara Amanda Gross Memorial Lectures, established by Mr. and Mrs. Walter H. Gross, are delivered annually by outstanding religious leaders to the entire University community.

Vera Therese Hahn Memorial Fund for the Performing Arts will use interest from the fund to bring to the campus artists and lecturers who will contribute to the educational experience of students studying theatre and/or public speaking; said artists and lecturers to be selected by the director of the University theatre.
A. G. Huegli Lectureship in Church-Related Higher Education is a lectureship series established by Dr. A. G. Huegli to stimulate discussion on key issues concerning church-related higher education.

Rae M. Huegli Memorial Lectures in Health and Hospital Care provide income for annual lectures in the College of Nursing and Health Professions. This endowed fund was established in memory of the wife of former President Albert G. Huegli because of her long interest in health services.

The Janet Lynn Kerr Memorial Lectureship in Asian Studies is an annual lecture made possible by the family, friends, and colleagues of Professor Kerr, a Christ College faculty member from 1991 until her death in 1999.

Kenneth A. Kress Physics Lecture Fund is used by the Department of Physics and Astronomy to host a lecture each year by an expert in the field.
O. P. Kretzmann Lectureship in Christian Ethics, established in honor of the late president of the University, is delivered annually. Earnings from the O. P. Kretzmann Memorial Fund underwrite the expenses. At the direction of the president of the University, the lectureship may periodically be replaced with a memorial sermon on a topic related to Christian faith and social issues.
A. J. W. and Elfrieda LeBien Endowment Fund for Lectures on Liturgy provides income for lectures on liturgy and for publication of brochures related to the chapel.

Monsanto Lectures on Tort Law Reform and Jurisprudence were established at Valparaiso University by the Monsanto Fund. This annual series is funded by a generous gift from the Monsanto Fund eleemosynary arm of the Monsanto Company. The gift enables Valparaiso University to invite distinguished scholars and professionals to re-examine the theory of tort as it has evolved in this country and to explore avenues for its reform.
J. W. Miller Memorial Lectures, delivered during Reformation Week by prominent religious leaders, were established in memory of Pastor J. W. Miller, who was an important influence in establishing Valparaiso University as a Lutheran University.

The Arnold Moeller College of Business Administration Endowment Lecture was established in 1989. The fund supports faculty research and development with the College of Business.

The Warren Rubel Lectures Endowed Fund was established in 1992 by alumni and friends of Christ College to honor Professor Rubel's service to the University and Christ College.

Edward A. Seegers Lectures are presented annually by an eminent legal scholar. The lecture series honors Mr. Edward A. Seegers, a benefactor of the University who endowed the Louis and Anna Seegers Chair in Law. The series is under the supervision of the Seegers Professor of Law.

Percy H. Sloan Memorial Lectures in Art, established as a memorial to Percy H. Sloan, who endowed the Sloan Collection of American Paintings, are presented by prominent artists and art critics.

Thomas F. Staley Distinguished Christian Scholar Lectures were established by Thomas F. Staley to further the evangelical witness of the Christian church, with a particular concern for college students.

Tabor Law Lectureship in Ethics was established by Mr. and Mrs. Glenn J. Tabor to provide funds for a law lectureship with emphasis on ethics.

University Lectures on various topics of current interest are presented from time to time at University convocations as an integral part of the University's educational program.

The Zahn Award and Lectureship Fund was established in 1971 by Irene Zahn in memory of her parents. The fund is to be used to provide for a scholarship for an art student and also provide for art lectures.

The annual Louis E. and Janice M. Zeile Lecture on Christian Vocation honors Valparaiso University graduates Louis E. Zeile (1950) and Janice M. (Kolterman) Zeile (1949). The lecture was established by their children and their spouses at the time of their parents' 50th wedding anniversary.

## Endowed Chairs and Professorships

Richard P. Baepler Distinguished Professor in the Humanities, endowed by a challenge grant from the National Endowment for the Humanities and generous gifts from alumni and friends of the University, is a rotating four-year appointment of a faculty member in a humanities discipline, established to honor the contributions of Richard P. Baepler and to enhance the interdisciplinary teaching of the humanities in general education.

The Walter E. Bauer Professorship of Art History was established through a grant from the National Endowment for the Humanities and friends of Valparaiso University to honor the late Dr. Walter E. Bauer in recognition of his leadership in advancing the study of art and its history at Valparaiso University.

The Paul H. Brandt Professorship of Business was established by Paul H. Brandt to promote excellent teaching and leadership in the College of Business.

The Paul and Cleo Brandt Professorship of Engineering was established by Paul H. Brandt to promote excellence in teaching in the College of Engineering.

The W.C. Dickmeyer Professorship in Christian Education was established by the family and friends of W.C. Dickmeyer, who was instrumental in the purchase of the University by a group of Lutheran clergy and laymen and who served on the Board of Directors of the University for more than 40 years.

The Phyllis and Richard Duesenberg Chair in Christian Ethics is a University professorship established by Phyllis and Richard Duesenberg to explore, research, write, and teach the ethical implications of contemporary social issues from the Biblical perspective and the perspective of Lutheran symbolic writings.

The Phyllis and Richard Duesenberg Chair in Christianity and the Arts in Christ College supports the research and writing of a scholar of national stature engaged in the study of religion and art.

The Phyllis and Richard Duesenberg Chair in Law recognizes and supports the work of a proven and productive scholar of national reputation and a teacher of demonstrated excellence.

The Phyllis and Richard Duesenberg Chair in Lutheran Music supports the teaching and study of a faculty member whose efforts focus on Lutheran music.

The John R. Eckrich Chair in Religion and the Healing Arts, a University professorship established by the Lutheran Charities Foundation of St. Louis in memory of John R. Eckrich, supports the study of the interrelationship of faith, ethics, and health.

The Walter G. Friedrich Professorship of American Literature was established with the support of the National Endowment for the Humanities and Friends of Valparaiso University to honor the late Dr. Walter G. Friedrich, Valparaiso University professor of English, and to support and encourage high quality teaching in American literature.

The Frederick F. Jenny Professorship of Emerging Technology was established by Catherine Jenny to honor the life and work of Frederick F. Jenny and to enable the selected College of Engineering faculty member to impart new knowledge to students.

The Emil and Elfriede Jochum Chair, a University professorship established through a gift from Mr. Emil Jochum, supports the study of Christian values in public and professional life.

The Kreft Endowed Chair for the Advancement of Nursing Science was established for the purpose of attracting and retaining high quality faculty for the College of Nursing and Health Professions and to further develop the academic, spiritual, and moral qualities of the current faculty.

Kruse Organist Endowed Professorship was established by Frederick J. Kruse in memory of his parents, Edward A. and Anna L. Kruse, for advancing the integral role of organ music at the center of the University's worship community.

The Erich H. Markel Chair in German Reformation Studies was established by the Max Kade Foundation in memory of the president of the foundation from 1959 to 1999. The Markel Chair supports the teaching and research of a faculty member in the field of history whose work focuses on an understanding and appreciation of German culture.

The Richard E. Meier Professorship of Management was established by Richard E. Meier to advance the College of Business.
The Louis S. and Mary L. Morgal Endowed Chair of Christian Business Ethics was established by Louis S. and Mary L. Morgal, with additional support from Proctor and Gamble, Inc., to promote the understanding and practice of Christian business ethics by students, faculty, and the business community.

The Surjit S. Patheja, M.D., Chair in World Religions and Ethics was established by Surjit S. Patheja, M.D., to promote appreciation of world religions, religious tolerance, and world peace.

The Frederick A. and Mazie N. Reddel Professorship of Music, established by the Reddel family to honor Fredrick A. and Mazie N. Reddel, is a professorship in the Department of Music.

Leitha and Willard Richardson Professorship of Engineering was established by Leitha and Willard Richardson to promote excellence in the College of Engineering.

The Herbert H. and Agnes S. Schulz Professorship of Business was established by members of the Schulz family in honor of their parents to support the high goals of the College of Business.

The Louis and Anna Seegers Chair in Law was established by Edward A. Seegers in honor of his parents to promote teaching and scholarship in the Law School.

The Alfred W. Sieving Chair of Engineering was established by a gift from Esther C. Sieving and Frances H. Sieving to honor their brother, Alfred W. Sieving, and to advance the College of Engineering.

## Special Academic Endowments

## The Carl and Isabelle Brauer Business Ethics Fund

This endowment has been established to support activities in the area of business ethics.

## The Carl and Isabelle Brauer Humanities Fund

The fund promotes professional activities in the humanities.

## The Carl and Isabelle Brauer Music Endowment

This endowment is intended to enhance the music program of the University.

## The Endowed Fund for Faculty Research and Faculty Development-1975 Senior Class Gift

This endowment supports both research expenses and faculty development projects.

## The Faculty Research and Development Endowment

This fund is being developed by contributions from the faculty and from friends of the University.

## The Albert G. Huegli Library Fund

This fund was established by friends to honor the former president of the University.

## Kapfer Research Award

This endowment, established by the Kapfer family, gives research support to a faculty member in the College of Arts and Sciences.

## The O. P. Kretzmann Memorial Fund for Research in the Healing Arts and Sciences

Established by the Wheat Ridge Foundation, this endowment annually supports faculty research.

## The Library Humanities Fund

This endowment was created by a major grant from the National Endowment for the Humanities which was matched by friends of the University, and exists to fund acquisitions in the humanities.

## The Sigrid Lindemann Faculty Development Endowment

This endowment was established by the late Helen Lindemann in memory of her daughter who had taught in the College of Nursing. Its earnings support professional activities and research in nursing.

## The Civil, Electrical \& Computer, and Mechanical Engineering Research Funds

These funds have been developed by the faculty of the College of Engineering to support research.

## The Arnold H. Moeller College of Business Administration Endowed Fund

This fund is available to the College of Business for purposes of underwriting professional growth.

## The Moody Laboratory Fund

This endowment supports the development of laboratories in the Department of Mechanical Engineering.

## The Rusch Memorial Library Fund

The earnings from this fund are used for library materials.

## The Janet Sievers Accounting Faculty Development and Research Endowment

Established by alumni in memory of Professor Janet Sievers, this fund is used to support professional activities and research in the area of accounting.

## The Judge Luther M. Swygert Memorial Endowment

Established by his family in memory of the late Judge, this fund supports the Moot Court Program of the School of Law.

## The Michael and Dianne Swygert Research Fellow

Awarded to a faculty member or librarian who, through his or her scholarship, lecturing, written work, and contribution to the advancement of knowledge, exemplifies the highest standards.

## The Michael and Dianne Swygert Teaching Fellow

Awarded to a faculty member or librarian who, through his or her teaching and service to students, exemplifies the highest standards of teaching and service.

## The Endowed Ziegler Family Research Fund for the Humanities

This fund supports faculty research in the humanities.

## International Study Programs



In an age of global interdependence, the University strongly encourages its students to acquire part of their education abroad. Students can explore their academic and professional interests in another part of the world while developing transferrable skills for their future such as cultural awareness, adaptability, independence, and in many cases proficiency in a foreign language. Credits and grades earned through Valpo-affiliated programs count towards graduation requirements and a variety of opportunities enable students to spend a semester, academic year, or even shorter terms such as spring break and summer in another country.

Students can choose from several program types including 1.) the Valpo Study Centers, 2.) Direct enrollment at an exchange partner university, 3.) Cooperative programs administered by a U.S.-based provider, 4.) the Valparaiso International Engineering Programs (VIEP), 5.) Faculty-led, short-term programs or research during breaks, and 6.) Consortia membership opportunities. Credits and grades earned through Valpo-affiliated programs are treated as though they were earned on campus. While the course offerings available through these programs vary considerably, students may frequently satisfy some Major, Minor, and/ or General Education Requirements through courses taken in these programs. Students should consult with department chairs and their academic advisor prior to participation in any program to verify that courses will satisfy certain requirements. General Education Requirements which have in the past been fulfilled or partially fulfilled by courses taken through these programs include the following: Fine Arts/Fine Arts-Literature, Foreign Language, History/Philosophy, Social Science, and Theology. Participation in any Valparaiso University semester or year-long study-abroad program fulfills the Cultural Diversity Requirement or Christ College seminar credit.

Students considering study abroad should consult their academic advisor as well as the Office of International Programs early in their academic program, to ensure the coherence and continuity of that program. Freshman year is not too early to begin thinking about studying abroad and with careful planning students can complete their degree program in four years.

In order to facilitate planning, both by students and the administration, students should apply two semesters in advance of the semester in which they plan to participate. The deadline for most applications is the fifth week of each semester, and selections take place in the sixth week. Applications may be submitted through the fifth week of the semester immediately preceding the semester abroad, if spots are still available.

Students are encouraged to participate in semester or year-long programs during their sophomore or junior year. The Tübingen, Granada, Rottenburg am Neckar, and Cergy programs require junior standing for participation. Beyond this, the programs have varying requirements for admissions. Some programs have a minimum foreign language requirement for admission.

Most financial aid that students receive while attending Valparaiso University may be applied to the Valparaiso Universitysponsored programs. Exceptions may include work-study and other on-campus aid such as music, performance, or athletic scholarships, which are simply put on hold for the semester off-campus. Please inquire in the Office of International Programs for more specific information. For the Valpo Study Centers, students pay regular tuition, the general fee, the double-room fee, and a study-center fee, if applicable (see page 417). For the other programs, students should check with the Office of International Programs concerning payment procedures. In most cases, the Office of International Programs handles the round-trip flight arrangements, but students pay the travel agent directly.

Students who choose to participate in programs sponsored by different institutions, at their own expense, should consult with the director of Study Abroad Programs. When students decide on a program, it is necessary to obtain the prior approval of an academic advisor, the director of Study Abroad Programs, and the dean of the college in order to assure in advance that the credit for courses taken abroad will transfer to Valparaiso University. Also meet with a member of the Financial Aid Office. Although Valparaiso University grants/scholarships are not available for non-Valparaiso University programs, Federal, Indiana, and private scholarships and loans are. You should continue to file your FAFSA by the state deadline each year. The Financial Aid Office will discuss your plans with you and answer questions regarding aid for your time off-campus as well as implications for outstanding student loans.

## Valpo Study Centers

## Cambridge, England

Directed by a resident professor from Valparaiso University, the Cambridge Study Center provides an ideal setting for eighteen students each semester to integrate their academic work with the rich heritage of Britain. Students live and study in facilities provided by the University, take a cohort of five courses ( 15 credits) taught by distinguished British professors and the resident director, and participate in two or three group tours to various historical regions of Britain. British professors may accompany students on these tours, helping them to integrate their cultural experience with their academic learning. Students may also take a class at nearby Anglia Ruskin University by special arrangement. One long break provides two full weeks of time for independent travel.

## Program Requirements

Sophomore standing and a grade point average of 2.75 are required.

## Program Curriculum

Students enroll in the five courses ( 15 credits), listed below. The first three courses are taught by British faculty, the other two by the resident director.

| ART 311 | Art Appreciation | 3 Cr . |
| :--- | :--- | :--- |
| GS 390 | Topics in English Life and Culture | 3 Cr. |
| HIST 351 | $20^{\text {th }}$ Century England | 3 Cr . |
| MUS 473 | Liturgical Theology \& Church Music | 3 Cr. |
| THEO 456 | Liturgical Theology \& Church Music | 3 Cr . |
| THEO 490 | Topics in Theology | 3 Cr. |

Courses may apply toward fulfillment of the following General Education Requirements- Humanities: Fine Art (ART 311 or GS 390), Humanities: History, and Theology.

This program is available in either the fall or spring semester.

## Reutlingen, Germany

The Reutlingen Study Center, located on the campus of its partner institution, the Hochschule Reutlingen, is under the direction of a resident professor from Valparaiso University. Students take a cohort of five courses ( 16 credits), which are taught by the resident director and German professors from neighboring institutions. Except for the German language courses (beginning or advanced), all courses are conducted in English. Several field trips, as well as the students' own travel experiences, complement the
in-class learning and encourage the development of broad new perspectives. Internship opportunities with German professionals are also a possibility for students with good German language skills. International Business majors participating in the Enhanced International Business in German (EIB - German) program will enroll in course-work at the Valpo Study Center in Reutlingen, while taking business electives in German at the Hochschule Reutlingen. Engineering majors participating in the Valparaiso International Engineering Program - Germany (VIEP - German) will also enroll in course-work at the Valpo Study Center as well as electives in German at the Hochschule Reutlingen.

## Program Requirements

Sophomore standing with a grade point average of 2.75 is required; no prior knowledge of German is required.

## Program Curriculum

Courses offered include:

| ART 311 | European Art and Architecture | 3 Cr. |
| :--- | :--- | :--- |
| ECON 290 | International Trade: Aussenwirtschaft | 3 Cr. |
| FLGR 101 | First Semester German | 4 Cr. |
| FLGR 200 | Utopian/Dystopian Literature and Social <br> Theory (German literature in English |  |
|  | translation) | 4 Cr. |
| FLGR 204 | German Composition and Conversation | 3 Cr. |
| CC 300 | Topic: Luther and Bach | 3 Cr. |
| COMM 390 | Topic: Luther and Bach | 3 Cr. |
| HIST 390 | Topic: Luther and Bach | 3 Cr. |
| THEO 329 | Topic: Luther and Bach | 3 Cr. |
| COMM 291 | Topic: German Cinema and Society | 3 Cr. |
| CC 300 | Topic: German Cinema and Society | 3 Cr. |
| SOC 290 | Topic: German Cinema and Society |  |

FLGR 101 and FLGR 204 may apply toward the General Education Foreign Language Requirement. FLGR 204 may apply toward a German major or minor or International Economics and Cultural Affairs major. Other courses may be used to fulfill General Education Requirements as follows: ART 311 fulfills the Humanities: Fine Art requirement; ECON 290 fulfills one of the Social Science requirements; THEO 329 fulfills the upper-level Theology requirement; HIST 390 fulfills the Humanities: History requirement; FLGR 200 fulfills the Humanities: Literature requirement.

This program is available in either the fall or spring semester.

## Hangzhou, China

The city of Hangzhou is well renowned for its cultural history, its tea and silk production, and according to Chinese tradition, for being a paradise on earth. Zhejiang University, which lies just north of West Lake, is the host institution for students wishing to study Chinese language and culture. Students generally study Chinese intensively, while having the opportunity to experience facets of Chinese culture through tours, lectures (in English), and demonstration classes of such arts as calligraphy and taiqi chuan. The Chinese Culture and Civilization course (EAST 395) involves the creation of a project which combines academic reflection with observation and experience. Additional courses may be offered, depending on the resident director. Students may also pursue independent study of China-related topics while in Hangzhou, with the assistance of faculty from Chinese and Japanese Studies and other departments. Classes are conducted from early September to mid-December, allowing for periods of travel.

## Program Requirements

Sophomore standing and a grade point average of 2.75 are required, but there is no prior Chinese language requirement.

## Program Curriculum

Students are placed in language courses according to an exam given at Zhejiang University. The following courses are offered:

| EAST 109 | Intensive Elementary Chinese | 5 Cr, |
| :--- | :--- | :--- |
| EAST 110 | Intensive Elementary Chinese: Conversation | 5 Cr . |
| EAST 209 | Intensive Intermediate Chinese | 5 Cr . |
| EAST 210 | Intensive Intermediate Chinese: Conversation | 5 Cr. |
| EAST 309 | Intensive Advanced Chinese I | 5 Cr. |
| EAST 310 | Intensive Advanced Chinese II | 5 Cr. |
| EAST 386 | Internship (for qualified students) | $1-3 \mathrm{Cr}$. |
| EAST 395 | Chinese Culture and Civilization | 3 Cr. |
| EAST 495 | Supervised Reading and Research | 3 Cr. |
| THEO 363 | Religions of China and Japan | 3 Cr. |

Two additional courses are offered by the resident director in his or her field of expertise.
EAST 109 and 110 are for students with no prior knowledge of Chinese and must be taken concurrently. Students may take both EAST 109 (Reading/Writing) and EAST 110 (Conversation) for credit, or they may take EAST 109 for credit and audit EAST 110. EAST 209 and 210 are for students with prior knowledge of Chinese and must be taken concurrently.

These courses may apply toward a major in Chinese and Japanese Studies. EAST 109, EAST 110, EAST 209, and EAST 210 may apply toward the General Education Foreign Language Requirement. THEO 363 will satisfy the Humanities: Upper-level Theology course General Education Requirement.

This program is available in the fall semester only.

## San José, Costa Rica

Students may study one semester, either fall or spring, or an entire academic year, at VU's own study center in San José, Costa Rica in partnership with The Praxis Center. San José, the capital of Costa Rica, is a city of about 1.5 million people located in the Central Valley of Costa Rica. It is a bustling modern city surrounded by mountains, about 2 hours from the Pacific coast and 4 hours from the Atlantic coast. Students will study the Spanish language and the history of Costa Rica during the first half of the term. In the second half of the term, students can either enroll in a part-time internship and an elective course, or choose to enroll in elective courses without the internship. Classes are held on the campus of the University of Costa Rica, the Universidad Bíblica Latinoamericana, and The Praxis Center, which are all located on the east side of town and easily accessible by public bus.

## Program Requirements

Sophomore standing and a grade point average of 2.75 are required. Prior knowledge of Spanish is recommended, such as FLS 203 or the equivalent of 3 semesters of college Spanish.

## Program Curriculum

Students are placed in language courses according to an exam given at the University of Costa Rica. The Spanish section of the Department of Foreign Languages and Literatures will award credit for these language classes. All students will enroll in the History course and the Internship. INTL 335 Perspectives on Healthcare in Costa Rica is an optional elective during the second half of the term. The following courses are offered:

| INTL 337 | The Ethnology \& History of Costa Rica | 3 Cr. |
| :--- | :--- | ---: |
| INTL 335 | Perspectives on Healthcare in Costa Rica | 3 Cr. |
| INTL 486 | International Internship | $1-3 \mathrm{Cr}$. |

Students can choose elective course-work from the University of Costa Rica's Spanish language program, the Universidad Bíblica Latinoamericana and The Praxis Center.

This program is available in the fall or spring term, or for the full academic year.

## Exchange Programs

## Chile - Universidad Viña del Mar

Students whose program interests include both Spanish and Latin American studies may apply to participate in the exchange program with the Universidad Viña del Mar, located on the Pacific coast next to Valparaíso, Chile. Participants live with a host-family and attend classes in Viña del Mar.

## Program Requirements

Intermediate Spanish skills (Spanish 204 or its equivalent, minimally), sophomore standing, a grade point average of 3.0 or better, and approval of the Spanish section are required.

## Program Curriculum

Students enroll in Spanish courses offered by the Universidad Viña del Mar, as well as other courses related to the culture and history of Chile and Latin America.

The program is available in the fall semester (August to December), spring semester (March to June) or for the full year.

## England - Anglia Ruskin University

A one-on-one exchange agreement makes it possible for Valparaiso University students to study for a semester or a full year at Anglia Ruskin University in Cambridge. Students pay tuition and General Fee to Valparaiso University, and pay room and board costs in Cambridge.

## Program Requirements

Sophomore standing with a grade point average of 3.00 and approval from the Director of Study Abroad Programs are required.

## Program Curriculum

Students can select courses from the full range of undergraduate programs in Liberal Arts, Science, and Business. For additional information, contact the director of Study Abroad Programs.

## France - l'Université Cergy-Pontoise

Valparaiso University has an exchange program with l'université de Cergy-Pontoise, located northwest of Paris, on the Seine, just 40 minutes by rail from the heart of Paris. Pontoise was a favorite painting site for the Impressionist painters. Cergy is a university of 12,000 students, which was founded in 1991. Cergy students come to Valparaiso University in the fall and Valparaiso University students go to Cergy in the spring. They are housed in one of several residence halls near campus.

## Program Requirements

French 204 or the equivalent, junior standing, a grade point average of 3.0 or better, and approval of the French section are required.

## Program Curriculum

Students take 9 credits of French-as-second-language courses (oral, written, grammar) at the appropriate level, and two courses in French civilization, politics, history, or other disciplines. All courses are considered Valparaiso University credits and count toward the French major or minor, General Education requirements, or as electives. This program is available in the spring semester only.

## France - La Rochelle International Business School

Valparaiso University has established an exchange partnership with La Rochelle Business School (Groupe Sup de Co) in La Rochelle on France's Atlantic coast. It offers a special opportunity for students to study Business Administration and develop their French language skills in this private business school of 1600 students. La Rochelle Business School students also come to Valparaiso for a semester of study. Valparaiso University students at La Rochelle Business School may take some courses in English. Valparaiso University students are housed in apartments near the university.

## Program Requirements

French 203 or the equivalent is required. College of Business students must have completed the Freshman/Sophomore core classes. Approval of the dean of the College of Business and the French section as well as a 3.0 overall grade point average are required.

## Program Curriculum

Students take a course in French as a Foreign Language as well as appropriate courses in various areas of business administration, which may include marketing, intercultural management, or international logistics. Some courses may be taken in English. Normally students will register for a total of about 14 credits. All credits are considered Valparaiso University credits and count toward College of Business electives or requirements, a French major or minor, general education requirements, or as elective credits.

The program is available only in the spring semester.

## Germany - Hochschule für Kirchenmusik, Rottenburg

Students whose program interests include both German and music may apply to participate in the one-on-one exchange with the Hochschule für Kirchenmusik in Rottenburg am Neckar.

## Program Requirements

This program requires advanced German skills (German 220 or its equivalent, minimally), advanced organ skills, junior standing, a grade point average of 3.0 or better, and approval of the German section and the Department of Music.

## Program Curriculum

Students enroll in courses offered by the Hochschule, all of which are related directly to music, and for studio lessons in organ. All courses are conducted in German. All courses are considered to be VU courses and will count toward the music major, toward General Education requirements, or as elective credit.

The program is available in the spring semester only.

## Germany - Eberhard-Karls-Universität Tübingen

Through a special one-on-one student exchange agreement with the Eberhard-Karls-Universität Tübingen, a limited number of Valparaiso University students may study there each year.

## Program Requirements

German 204 or the equivalent, junior standing, a grade point average of 3.0 or better, and approval of the German section are required.

## Program Curriculum

The Language and Orientation Program, a five-week intensive course before the beginning of the German academic year, is conducted by the Universität Tübingen for foreign students. During the academic year, students may choose courses from among the varying offerings at the Universität Tübingen.

The five-week Language and Orientation Program allows students to earn three elective credits towards the German major or minor requirements. Other courses may apply toward certain General Education and/or major or minor requirements; students must consult with relevant department chairs before departure for Tübingen.

This program is available for the full academic year only.

## Japan - Kansai Gaidai University

Valparaiso University has an exciting exchange program with Kansai Gaidai University, located in the culturally rich area between Osaka and Kyoto. The program offers Japanese language instruction and a number of East Asian studies courses taught in English, including topics in business, art, economics, and history. Students have the option of living with host families or in dormitories located on campus. Students pay all fees, including room, meal plan, tuition, and general fee to Valparaiso University. The program is available fall and/or spring semesters.

## Program Requirements

A grade point average of 3.00 and sophomore standing are required. Two semesters of college Japanese are recommended but not required. References from academic advisors and professors are also needed, as well as permission from the director of International Programs. Admission is competitive.

## Program Curriculum

Students are placed in Japanese language classes according to proficiency tests given during orientation in Japan. Students are required to study the language, but are free to choose among the courses offered as long as full-time status is maintained.

Courses taken in Japan may apply toward certain General Education Requirements, or fulfill major and/or minor requirements in Chinese and Japanese Studies, International Economics and Cultural Affairs, or Japanese. The course offerings vary from semester to semester, so students must consult with their academic advisors and the appropriate bulletins to match their course selections with requirements.

## México - Universidad de las Américas-Puebla

Valparaiso University students may study fall semester, spring semester, or the entire year at the Universidad de las Américas Puebla (UDLAP) in Puebla, Mexico. Cholula, a small town rich in pre-Hispanic history, is a short bus ride from Puebla, a modern city of two million people located about 100 miles southeast of Mexico City. Surrounded by breathtaking snow-capped mountains, the region offers a wide variety of cultural experiences through which students come to understand this country, which is both ancient and modern, developing and industrialized, relaxed and bustling. Students live with Mexican suitemates in on-campus residence halls.

## Program Requirements

Spanish 203, at least sophomore standing, and a grade point average of 3.0 or better are required.

## Program Curriculum

Based on a placement exam, students enroll in Spanish language, literature, business, and civilization courses for international students, offered at the beginning, intermediate, and advanced levels. Students with solid language skills may enroll in one or more courses from the regular curriculum for Mexican students. Past offerings taught in Spanish include courses in Art, Psychology, and Political Science. Courses taught in English have included the areas of Economics and Political Science.

Courses may apply toward the Spanish major or minor, or toward certain General Education Requirements, including Social Science, Humanities: Fine Art, Foreign Language, and/or Cultural Diversity course.

## Spain - Universidad de Zaragoza

One of Valparaiso University's newest exchange programs with the Universidad de Zaragoza offers students the opportunity to enroll in Spanish courses at the Center of Spanish as a Foreign Language at the Universidad de Zaragoza, as well as take one or two additional courses from the university at large. Zaragoza is a very rich city in art history and offers students the opportunity to travel easily around Spain and Europe. Students live with a host-family.

## Program Requirements

Intermediate Spanish skills (Spanish 204 or its equivalent, minimally), sophomore standing, a grade point average of 3.0 or better, and approval of the Spanish section are required.

## Program Curriculum

Students enroll in Spanish courses offered by the Universidad de Zaragoza faculty members, as well as other courses focusing on history, literature, history of art, and society, among others. In addition, students have the option of enrolling directly into the Universidad de Zaragoza's business and engineering schools, taking such coursework in Spanish. Engineering majors participating in the Valparaiso International Engineering Program - Spanish, will enroll at the Universidad de Zaragoza.

The program is available in the fall semester, spring semester, or for the full year.

## Utrecht, Netherlands - University College Utrecht Exchange Program

Study at an honors college in a beautiful, historic city in the heart of Europe. Christ College has recently formed this partnership with University College Utrecht (UCU), a liberal arts honors college in The Netherlands. Christ College students will be able to study at a prestigious European university with students from across Europe, and the globe, in a small, honors college setting. The entire campus is English-speaking, and many of the inhabitants of The Netherlands speak English as well.

## Program Requirements

Students will be nominated by Christ College faculty.

## Program Curriculum

Christ College students will be able to choose from a wide variety of courses, all taught in English, which can fulfill Christ College, general education, and/or major and minor requirements, with careful planning.

## Valparaiso International Engineering Program

## VIEP-French: Université de Technology de Compiègne

VIEP-French is a five-year program that leads to a B.S. degree in one of four engineering disciplines (civil, computer, electrical or mechanical) and a major or minor in French. Students spend the fourth year abroad, enrolling in several courses in the fall term at the Université de Technology de Compiègne (UTC) near Paris, France. They then spend the spring semester in a co-op work experience in France. Compiègne is an historic city about 50 miles northeast of Paris.

## Program Requirements

Students must be enrolled and in good standing in the VIEP -- French program. Approval of the VIEP -- French directors is required. See the VIEP description on page 323.

## Program Curriculum

Courses to be taken at UTC are chosen in consultation with the student's College of Engineering advisor and will include engineering courses as well as a course in French as a foreign language. All courses are considered to be Valparaiso University credits and will count toward the student's engineering major and French major or minor.

## VIEP-German: Hochschule Reutlingen

VIEP-German is a five-year program that leads to a B.S. degree in one of four engineering disciplines (civil, computer, electrical, or mechanical) and a major or minor in German. Students spend the fourth year abroad, enrolling in several courses in the fall term at the Valpo Study Center in Reutlingen and a technical course in German at the Hochschule Reutlingen. Students then work for a German company or research laboratory in the spring semester and summer for a co-op placement. Students live in campus housing for the fall term and many stay in Reutlingen for the co-op placement, although some students may prefer to seek a position farther away.

## Program Requirements

Students must be enrolled and in good standing in the VIEP-German program. Approval of the VIEP-German directors is required. See the VIEP description on page 323.

## Program Curriculum

Courses to be taken at the Hochschule Reutlingen are chosen in consultation with the student's College of Engineering advisor and will include engineering courses as well as a course in German as a foreign language. All courses are considered to be Valparaiso University credits and will count toward the student's engineering major and German major or minor.

## VIEP-Spanish: Universidad de Zaragoza

VIEP-Spanish is a five-year program that leads to a B.S. degree in one of four engineering disciplines (civil, computer, electrical or mechanical) and a major or minor in Spanish. Students spend the fourth year abroad, enrolling in several courses in engineering, math or science, taught in Spanish, during the fall term at the Universidad de Zaragoza. Students will have an opportunity to take a two-week intensive Spanish language course before the start of the semester. In the spring, students work for a Spanish company or research laboratory either in Zaragoza or elsewhere. Students receive personalized assistance in housing, course selection and more from the School of Engineering and Architecture's International Office. Students are encouraged to live with a host-family, but can also live in a shared apartment with other university students.

## Program Requirements

Students must be enrolled and in good standing in the VIEP-Spanish program. Approval of the VIEP-Spanish directors is required. See the VIEP description on page 324.

## Program Curriculum

Courses to be taken at the Universidad de Zaragoza are chosen in consultation with the student's College of Engineering advisor and will include engineering courses as well as a course in Spanish as a foreign language. All courses are considered to be Valparaiso University credits and will count toward the student's engineering major and Spanish major or minor.

## VIEP in China: Zhejiang University

VIEP in China is a five-year program that leads to a B.S. degree in one of four engineering disciplines (civil, computer, electrical or mechanical) and a minor in Chinese. Students spend the fourth year and following summer abroad, enrolling in the Valpo Study Center in Hangzhou during the fall semester. Students will study intensive Mandarin Chinese at Zhejiang University. In the spring, students work for a U.S.-based or Chinese company in China or participate in a research project at a Chinese university. Students will live in a residence hall at Zhejiang University during the fall term and can either remain in Hangzhou for the co-op placement or seek a position elsewhere.

## Program Requirements

Students must be enrolled and in good standing in the VIEP in China program. Approval of the VIEP in China directors is required. See the VIEP description on page 324.

## Program Curriculum

Courses to be taken at the Valpo Study Center in Hangzhou and at Zhejiang University are chosen in consultation with the student's College of Engineering advisor and will include Chinese as a foreign language. All courses are considered to be Valparaiso University credits and will count toward the student's engineering major and Chinese minor.

## Affiliate Programs

## Athens, Greece - College Year in Athens

Valparaiso University has a study-abroad option in Greece through the College Year in Athens program. College Year in Athens is an independent study-abroad program offering college-level courses in Ancient Greek Civilization. Enjoying an excellent reputation among North American colleges, College Year in Athens enrolls approximately one hundred students per semester.

## Program Requirements

Students in good academic standing with at least 16 credits of Greek or eight credits of Greek and nine credits of classical civilization courses are eligible to apply. The junior year, however, is the best time for most students to leave the home campus for study abroad.

## Program Curriculum

Students choose from a wide variety of courses dealing with the classical world. These courses, which represent such disciplines as Archaeology and Art, Classical Languages and Literature, History, Philosophy, Politics, and Religion, may count towards a major or minor in Classics with the approval of the chair of the Department of Foreign Languages and Literatures. Normally four courses constitute full-time study.

Valparaiso University's arrangement is for fall semester only.

## Budapest, Hungary - Budapest Semesters in Mathematics

In cooperation with Budapest Semesters in Mathematics (BSM), Valparaiso University offers the opportunity for select mathematics majors to study advanced course-work from leading Hungarian scholars. Students spend part of their junior or senior year in a 15 -week program located in Budapest, Hungary. Budapest, a city of about two million, has a long tradition of mathematical scholarship and is home to eleven universities. Students can choose to live with a home-stay or in a furnished apartment with other BSM students.

## Program Requirements

Junior or Senior standing and a nomination by the Department of Mathematics and Statistics. Generally a cumulative 3.7 GPA is required.

No prior knowledge of Hungarian required. All courses are conducted in English.

## Program Curriculum

Students enroll in about four classes for the fall or spring semester and credit is awarded by the Department of Mathematics and Statistics. An optional two-week intensive Hungarian course is available before the beginning of the program and includes tours of the city and practical living skills.

## Granada, Spain - Central College Abroad

In cooperation with Central College in Pella, lowa, Valparaiso University offers the opportunity to a limited number of students to study at the Center for Modern Languages at the Universidad de Granada in Spain. The semester begins with a two-week orientation program, designed to improve students' oral and written skills and to introduce them to Spanish daily life. At the end of this period, a placement test will be given to determine the appropriate level of Spanish. Based on the language test, students will be placed onto one of three tracks: Intensive Language (Beginner), Language and Culture (Intermediate, around 3 semesters of Spanish), or Hispanic Studies (Advanced, four semesters or more).

## Program Requirements

Spanish 204 and at least one additional 200-level Spanish course, junior standing, a grade point average of 3.00 (both overall and in Spanish courses), and approval by the Spanish faculty are required.

## Program Curriculum

After successful completion of the two-week orientation program, students may take courses from general categories including the following: Spanish Business, Spanish Civilization and Culture, Contemporary Spanish Economics, History, Regional Geography, Spanish Literature and Language. The track into which students are placed defines the variety of courses they can take: the higher the level, the wider the variety. All students are required to take the Granada Seminar ( 1 credit) and Phonetics (1 credit), both of which are offered by Central College. It is also possible to arrange a service-learning opportunity for two credit hours. All courses are conducted in Spanish. Students will receive 2 credits for the orientation program, and then enroll in five more courses for 3 credits each (Total: 12-19 credits).

This program is available for the fall semester or for the full-year, but NOT for the spring semester.

## Nantes, France - IES Abroad

Nantes is well-known for being a charming city in which to live in France, and it's quite easy to see why. Home to many young professionals and students, there are plenty of new friends to make and an active nightlife waiting for you in Nantes. This program enjoys a close relationship with the Université de Nantes. You have access to the school's libraries, computer labs, cafeterias, and sports facilities, and are welcome to join student clubs and other social and sports organizations. You also have many opportunities for enrolling in university courses. IES Abroad courses are taught in French by native French faculty, many of whom are professors at the Université de Nantes. You select from IES Abroad language and area studies courses, and can add a teaching internship and university courses to complete your schedule.

## Program Requirements

Students must have at least sophomore standing, at least a 2.75 cumulative GPA, and have taken at least four semesters of collegelevel French.

## Program Curriculum

Our French Language Immersion \& Area Studies Program has two important goals: to improve your written and verbal proficiency in French through language and area studies courses, and to introduce you to contemporary France and its role in the European Union. A beautiful and bike-friendly city on the Loire River, Nantes offers wonderful food, outdoor spaces, and stunning modern and classic architecture.

## Paris Internship Program - Boston University

Students of French may also choose to participate in a study-abroad and internship program in Paris, administered by Boston University.

## Program Requirements

Minimum requirements for enrolling in this program as a Valparaiso University student are completion of French 204 and an overall grade point average of 3.00. An internship is an enormously valuable experience, but one that places great demands on students' communication and work skills. For that reason, it is recommended that students with strong French language skills enroll in this program after completion of their sophomore year.

## Program Curriculum

Students begin the program with a one-week orientation and seven weeks of intensive language course work to prepare them for the internship. Upon successful completion of the language component, students intern in French businesses in Paris for eight weeks. They are assisted in finding internships in one of the following areas: Arts/Architecture/Arts Administration; Business/Economics/Finance; International Organizations; Politics/International Relations; Health/Human Services; Advertising/Marketing/Public Relations; Film/Radio/Television; Journalism; or Hospitality Administration.

This program is one semester only. Students may enroll for either the fall or spring semester.

## Windhoek, Namibia \& Southern Africa - Augsburg College

As a result of a partnership with the Center for Global Education at Augsburg College, Valparaiso University offers a challenging study-abroad program in Windhoek, Namibia, in Southern Africa. Valparaiso University students live together with other students from the United States, as well as with families in Soweto, South Africa; in Windhoek, Namibia; and in a rural Namibian community.

## Program Requirements

Sophomores, juniors, and seniors with a grade point average of 3.0 are eligible to apply. Enrollment is limited to twenty-four students each semester, drawn from colleges and universities throughout the United States. All courses are conducted in English.

## Program Curriculum

The theme for both semesters is Nation Building, Globalization, and Decolonizing the Mind: Southern African Perspectives, and the offerings include courses in the following disciplines: political science, religion, interdisciplinary studies, and sociology. An internship is also possible. Much of the coursework involves encounters with the people and culture outside the walls of the study center, thus making the semester an outstanding learning experience.

A limited number of Valparaiso University students may study in Namibia either semester.

## International Education Programs (IEP)

Valparaiso University has a partnership with International Education Programs. A unique asset to IEP is its strategic partnership with Center for International Studies Abroad (CISabroad) to offer additional programs to Valpo students. IEP at Valparaiso University offers traditional semester and summer programs, internship placements, volunteer projects, and faculty-led programs to over 30 destinations worldwide. IEP is in the Office of International Programs and can provide additional information about these programs. Interested students must be approved by the Office of International Programs in order to apply for CISabroad programs and to earn credit toward their degree requirements at Valparaiso University. For more information, please contact study.abroad@valpo.edu.

## Limerick, Ireland

Study business courses abroad at the University of Limerick in Ireland through CISabroad, a program provider in cooperation with International Education Programs. This program offers state-of-the art facilities, great housing, and classes with Irish students so you can immerse yourself in the local culture. Explore castles, stroll along the Shannon River, and learn the fiddle during your semester abroad in Ireland!

## Program Requirements

Sophomore standing and a cumulative GPA of 2.9 are required.

## Program Curriculum

Students enroll in about four classes for the fall or spring semester. Credit must be preapproved by your department and the Office of the Registrar.

## Newcastle, Australia

Study STEM courses abroad at the University of Newcastle in Australia through CISabroad, a program provider in cooperation with International Education Programs. The University of Newcastle has a stunning, ecologically sustainable campus where students can experience the true Aussie lifestyle. This program gives STEM students an incredibly unique experience to take specific courses in fields such as marine biology, mechanical engineering, chemistry, and more!

Program Requirements
Sophomore standing, and a cumulative GPA of 2.5 are required.

## Program Curriculum

Students enroll in about four classes for the fall or spring semester. Credit must be preapproved by your department and the Office of the Registrar.

## Faculty-led, Short-term Programs

Valparaiso University offers various short-term, faculty-led programs or research abroad for academic credit, which generally take place during the two-week spring recess or during the summer. Students are encouraged to take advantage of these opportunities and should inquire with the Office of International Programs for an updated list of programs. Additional questions should be directed to Valparaiso University Study Abroad.

## Facilities for Learning



## University Library Facilities and Services

Students turn to the Christopher Center to reach a level of independence in finding resources and in understanding the mechanics of information, utilizing computers for retrieval, and reading, interpreting, and writing citations. They learn informationseeking skills, including how to articulate their research needs. Most importantly, students learn how to evaluate information, find different viewpoints, and recognize the biases of any author through customized assistance. The librarians also provide coursespecific, assignment-based information literacy instruction in collaboration with each academic college, as well as individual student research appointments.

The Christopher Center for Library and Information Resources has an important place in student academic achievement. It is home to all University Library Services (except Law), the publicly accessible Help Desk for Information Technology, the Academic Success Center, Disability Support Services, and the campus Writing Center. At 105,000 square feet, it provides a comfortable atmosphere for research, inquiry, discussion, and study. With 178 public computers, 30 charging stations, three fireplace lounges, a gourmet coffee shop, and dozens of group study spaces, students will find the Christopher Center to be a modern, state-of-the-art campus facility to meet their research needs. It can hold a total of 600,000 library volumes, both on open bookshelves throughout the center and in its robotic high density storage and retrieval system.

Library services play an important role in scholarly communication by organizing print and electronic information for easy retrieval. An online public catalog of its holdings is searchable in a variety of ways. It is accessible throughout the world via the Library Services home page http://library.valpo.edu. The holdings in the catalog include materials in a variety of print and electronic formats. The Christopher Center holds the Moellering Collection, which is comprised of more than 340,000 volumes, adding approximately 4,000 new print volumes each year. In addition, the campus community may access over 8,800 e-books through the catalog.

The Library Services home page offers scholarly information across academic disciplines to more than 55,000 journals, 150,000 e-books, and approximately 190 electronic databases. We also subscribe to a discovery tool (Summon), which searches most of the library's paid content (articles, books, etc.) on one platform. Students may request interlibrary loan service for articles and books that are not held locally.

The Law Library at Wesemann Hall holds a collection of more than 185,000 bound volumes and 1,000,000 microforms, with 2,332 current periodical subscriptions. LEXIS and WESTLAW subscriptions add to the rich information resources available for use by Valparaiso University law students and scholars. The Christopher Center and the Law Library provide the resources and services that connect the University community to the information that each member needs. New services and resources are continuously evaluated for selection, acquisition, and organization to support the mission of the University.

## Information Technology

Valparaiso University's dynamic information environment provides support for excellent teaching and learning, quality research, effective decision making, efficient administration, and open communication among the members of the University community.

The Office of Information Technology (IT) coordinates and manages servers; data networks (wired and wireless) including internet access; communication resources including email, voice mail, telephone services, satellite television; classroom technology; general access computing facilities; software related to the academic and administrative functions of the University; and much more.

## The Valparaiso University Network

IT manages services which provide email, websites, administrative data, shared file space, network printing, departmentspecific functions, general productivity software, discipline-specific applications, and many other functions.

## Network Access

Residence hall rooms, faculty and staff offices, all general-purpose computer clusters, classrooms, and laboratories, and many special-purpose computer labs are connected to the Valparaiso University network via wired or wireless access. This network provides access to the internet, email, printing, network storage space, library resources, and a variety of applications. For those living off campus or away from campus on internships or trips, most resources on the University network are accessible via other internet domains, including commercial internet service providers.

## Computer Access for Students

All residence halls have a computer lab open 24 hours per day for residents with multiple workstations and network printer access. All residence hall rooms have both wired and wireless access available, allowing those who bring their own computers to connect to the campus network. The computer lab in the Harre Union is also available 24 hours per day; students must use their OneCard (ID card) to gain entry after normal hours. Many computer facilities in the Christopher Center for Library and Information Resources are available for general use. Other general purpose and departmental computer labs are available in various locations across campus.

## Assistance with Resources

The IT Help Desk, located on the first floor of the Christopher Center, is managed by professional staff and student consultants who will answer technology-related questions and route service requests (ITickets) to technical staff. The Help Desk should be the first stop for assistance with campus technology, and is accessible in a variety of ways, including online (https://helpdesk.valpo.edu), email (helpdesk@valpo.edu), phone (219.464.5678), and in person.

General applications supported include email, web browsers, anti-virus/anti-malware applications, printing, word processing, spreadsheets, databases, desktop publishing, an online course management system, an online registration and records system, statistical analysis software, presentation graphics, mobile device connectivity, and more. Many departments have discipline-specific applications on the network or in departmental computing labs.

IT offers free instructor-led technology training sessions to assist students with specific applications and technology topics. In addition, the Lynda.com Online Training Library ${ }^{\circledR}$ is available to all students. Lynda.com provides 24 -hour access to thousands of video training courses on business software, technology, and creative topics for learners of all levels via any device connected to the internet.

## Honors and Awards

## Graduation Honors

## Summa Cum Laude

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a standing of at least 3.80 in their work at this institution are graduated Summa Cum Laude.

## Magna Cum Laude

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a standing of at least 3.60 in their work at this institution are graduated Magna Cum Laude.

## Cum Laude

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a standing of at least 3.40 in their work at this institution are graduated Cum Laude.

## Christ College Honors

Graduates who complete the requirements of the honors college, Christ College, are designated Christ College Scholars.

## Departmental Honors

Students in many departments of the College of Arts and Sciences may be awarded honors in their field of study provided they meet the specific requirements described on page 63 and following.

## Semester Honors

Undergraduate students who achieve a standing of 3.50 in any semester are awarded semester honors under the following restrictions:

1. The student received no grades of $I$ or $U$ at the official end of the semester concerned;
2. The student completed at least fourteen credit hours of work for that semester on campus or at least twelve credit hours in an international studies semester, special off-campus semester or any other approved cooperating program.

Semester Honors are also referred to as the dean's list.

## National College Honor Societies

## Alpha Epsilon Delta

This national honor society recognizes students who have achieved academic distinction while pursuing a pre-medical or predental program.

## Alpha Lambda Delta

This national honor society recognizes women and men who achieve high scholastic standing during their freshman year.

## Alpha Sigma Lambda

This national honor society is devoted to the advancement of scholarship and to the recognition of students in continuing higher education programs.

## Beta Gamma Sigma

This national honor society is restricted to students in business schools which have achieved accreditation from the Association to Advance Collegiate Schools of Business. Students in the upper ten percent of the senior class and the upper seven percent of the junior class of the College of Business are eligible for membership.

## Lambda Pi Eta

This national honor society of the National Communication Association (NCA) recognizes communication majors who have achieved a high level of academic excellence.

## Phi Beta Kappa

This national honor society, founded in 1776, recognizes academic excellence and outstanding scholarly achievement in the liberal arts and sciences.

## Sigma Theta Tau

This international honor society for nursing elects outstanding upper class students to membership on the basis of scholarship, leadership, and character.

## Tau Beta Pi

Engineering students who have demonstrated high academic achievement, exemplary character, and a breadth of interest in the field of engineering are eligible for membership in this national engineering society.

## Departmental Honor Societies

Accounting-Accounting Society
Chemistry-Phi Lambda Upsilon
Classics-Eta Sigma Phi
Decision Science-Alpha lota Delta
Drama-Alpha Psi Omega
Economics-Omicron Delta Epsilon
Education-Kappa Delta Pi
English-Sigma Tau Delta
French-Pi Delta Phi
Geography-Gamma Theta Upsilon
German-Delta Phi Alpha
History-Phi Alpha Theta
Journalism-Society of Collegiate Journalists

Meteorology-Chi Epsilon Pi<br>Music-Pi Kappa Lambda<br>Philosophy-Phi Sigma Tau<br>Kinesiology-Phi Epsilon Kappa<br>Physics-Sigma Pi Sigma<br>Political Science-Pi Sigma Alpha<br>Psychology-Psi Chi<br>Social Science-Pi Gamma Mu<br>Social Work-Phi Alpha<br>Sociology-Alpha Kappa Delta<br>Spanish-Sigma Delta Pi<br>Theatre-Alpha Psi Omega<br>Theology-Theta Alpha Kappa

## Awards and Prizes

## James and Joanne Albers Theology Paper Prize

This prize is presented annually by the Theology Department to the graduating theology or theology and ministry major who has written the outstanding thesis (or other major course paper) in theology during the senior year. The award is made possible by the generosity of Professor of Theology emeritus James Albers and Joanne Albers, his wife.

## Bauer Award

This prize is presented annually by the History Department to the history major who has written the best historical paper during the year. The award is made in the name of Dr. Walter E. Bauer, Distinguished Service Professor Emeritus of History.

## The Bluemel Award

Awarded to a graduating senior nursing student who demonstrates determination, perseverance, a sense of humor, a desire to elevate the standards of nursing, recognition of the importance of the role of the nurse in prevention of illness, and a concern for human worth and dignity, regardless of race, creed, or culture.

## Delta Sigma Pi Award

Awarded to a College of Business senior with the highest cumulative grade point average after seven semesters of study.

## The Donnelley Prize

The Donnelley Prize annually rewards the best student essays on humankind's relationship to the environment with a cash award of $\$ 750$ and support for summer internships or research in environmental issues, particularly in the Chicago region. Environmental and biomedical ethicist Strachan Donnelley, Ph.D., a former Christ College faculty member and Vivian Donnelley, a Valpo alumna, endowed the prize.

## Bruce and Linda Eastmond Award

These are annual awards presented to an outstanding senior student in the College of Engineering and an outstanding senior student in the College of Arts and Sciences.

## Roger and Hazel Guillaumant Award

This award is presented annually by the Department of Foreign Languages and Literatures to the French major who has demonstrated outstanding achievement and promise in French studies. It is given in honor of Professor Emerita Hazel Guillaumant and her husband, Roger.

## The Patterson MacLean Friedrich Scholarship

The Friedrich Scholarship is awarded annually to the outstanding junior student majoring in French at Valparaiso University.

## The Victor Hoffmann Award

Each year the Beta Nu Chapter of Pi Sigma Alpha, national honorary political science organization, presents an award to the outstanding political science major voted by the faculty of the Political Science and International Relations Department.

## Howard K. Hughes Mathematics Prize

An annual award is presented to the Valparaiso University student who shows the greatest proficiency in the first four calculus courses. This proficiency is demonstrated through participation in the Hughes Mathematics Competition which takes place in the spring semester of each academic year.

## Indiana CPA Society Award

Awarded to the outstanding senior accounting student in the College of Business.

## Indiana Medical Association of Northwest Indiana Scholarship in Nursing

This award is presented to a student entering the senior year who is selected by the dean of Nursing and Health Professions. The student must have resided in Northwest Indiana prior to admittance into Valparaiso University and plan on practicing in Northwest Indiana after graduation.

## Alfred H. Meyer Award

The Alfred H. Meyer Award annually recognizes a geography major based on his/ her performance in a variety of categories. This award was established by alumni of Valparaiso University's geography program and members of the faculty to honor Dr. Meyer who served the Department of Geography and Meteorology (known then as the Department of Geography and Geology) as its founder and first chair. The award includes a cash prize.

## Walther M. Miller Memorial Prize

The Miller Prize is awarded annually to the senior student who has majored in German and demonstrated excellence in German studies at Valparaiso University. It is awarded in memory of Walther M. Miller, Distinguished Service Professor Emeritus of German Language and Literature.

## Thora Moulton Prize

The Moulton Prize is awarded annually to the outstanding junior student in German studies and is awarded in honor of Professor Emerita Thora Moulton.

## Nancy Wehmeier Nagel and Robert B. Nagel Prize

The Nancy Wehmeier Nagel and Robert B. Nagel Prize is awarded annually to the graduating female mathematics major with the highest grade point average.

## Eugene M. Rasmusson Award

The Eugene M. Rasmusson Award annually recognizes a meteorology major based on his/ her performance in a variety of categories. The award was established to honor Dr. Rasmusson who has dedicated his distinguished career to the field of meteorology and is widely recognized for his research and publications and for his superior example of scholarship and service. The award includes a cash prize.

## The Ronald G. Reidenbach Prize in Music

An annual award honors a graduating student of church music who has made a significant contribution to campus life. The award is made in memory of Ronald G. Reidenbach, alumnus of the University and musician to Lutheran churches in Ohio, Illinois, and Maryland.

## The Dorothy Paulsen Smith Award

Awarded to a graduating senior nursing student whose quest for excellence has reflected the spirit of the College of Nursing and Health Professions. Criteria for choice include demonstrated scholarship and leadership, openness and enthusiasm, energy and creativity, empathy and compassion.

## The Donna Spanopoulos Memorial Scholarship in Pediatric Nursing

This award is presented by the Spanopoulos family each spring to a student entering the senior year, in memory of the founder of Infant and Child Special Care, Valparaiso, now part of Children's Memorial Hospital. The $\$ 1,000$ award was established to encourage interest in the practice of pediatric nursing. The student must demonstrate academic and clinical excellence in the nursing care of children and an expressed interest in specializing in pediatric nursing.

## Anna Zink Springsteen Prize

This prize is awarded to a senior, preferably an English major who has made a substantial contribution to campus life with special gifts in poetry composition.

## Margot Ann Uehling Endowed Scholarship Prize

Awarded annually to an undergraduate student who writes the best nonfiction prose essay.

## The Wall Street Journal Award

Awarded to the outstanding senior business student in the College of Business.

## The Charles W. Wolf Award

The Charles W. Wolf Award is presented annually to the most outstanding pre-medical arts junior who is majoring in either chemistry or biochemistry.

## Medals

## Lumen Christi Medal

This medal is awarded to a lay person for distinguished service to Lutheranism. It is the highest honor Valparaiso University can bestow.

## Medal of Merit

This medal is an award to recognize the outstanding service to society by the recipients through their chosen calling and by their exceptional activity in the advancement of the mission of Valparaiso University.


## Student Life

The University accepts and practices the view that a liberal education concerns the whole person. Its residential and cocurricular life encourages students to develop their full potentials, complementing and enriching their academic curricula.

The Office of the Vice President for Student Affairs coordinates the services offered to students and promotes a wide range of campus activities which enhance residential living at Valparaiso University.

## Student Residences

The majority of undergraduate students live in one of twelve University residence halls and apartment buildings, or in one of the five fraternity houses located on or near the campus.

Alumni, Brandt, Lankenau, and Wehrenberg Halls are residence halls with rooms for two students. All are coed halls with men and women living on alternate floors. Guild and Memorial Halls offer rooms for one, two, three, and four students. Guild Hall houses all women, while Memorial Hall houses all men. The two buildings share a main entrance and large public area on the first floor. Sorority Housing is divided into individualized houses to provide living and chapter room accommodations for University sororities. Beacon Hall is a suite-style coed hall, and 807 Mound currently houses all men. Each hall has its own student council and peer judicial board. In addition, Uptown East Apartments, and Promenade East Apartments provide apartment-style living options for upper class students. The Kade-Duesenberg German House and Cultural Center offers students the opportunity to live in a German language house.

## Student Conduct and the Honor System

Valparaiso University holds to the ideal of a community of Christian scholars living together in freedom and civility, in an environment conducive to Christian faith and supportive of the Christian ethic. A minimum number of rules and regulations is necessary for this community; these are found principally in the Student Guide to University Life.

Each student enrolling at Valparaiso University thereby accepts the rules, regulations, and procedures as found in this catalog and the Student Guide to University Life. Conformity to the traditions and regulations of the University is expected. The University reserves the right to suspend or dismiss any student at any time when, in the judgment of its authorities, that action is deemed to be in the best interests of the institution. Such a decision is normally made by the vice president for Student Affairs on the recommendation of the Campus Judicial Board.

The student-initiated Honor System has a long history at Valparaiso University and is a strong distinguishing characteristic of the institution. It is in every way consistent with the highest principles of Christian ethics and morality. In sanctioning the Honor System, the University presumes that students are able and willing to accept the duties and responsibilities of honorable conduct for the sake of the Valparaiso University community. All entering students must agree that they understand the Honor System and are aware that all of their academic work must be submitted under their signature and that they have done this work in agreement with the Honor Code. The statement "I have neither given or received nor have I tolerated others' use of unauthorized aid" must be written out and signed on all written work.

Under the Honor System, all written examinations of any length are taken in an atmosphere free from the surveillance of a proctor, unless specifically requested. Every student has the responsibility to keep academic work free of dishonesty; that is, neither to give nor to receive unauthorized aid. All students must report to the Honor Council any violation of the system of which they become aware. Students are required to sign a pledge on all work submitted for academic credit as indicated above.

The Honor Council is an educational, preventive, remedial, and judicial body with the duty of maintaining the Honor System in the academic community. The council hears Honor Code cases and then makes decisions about whether or not a student has violated the code and assesses any penalties. The council is composed of students and faculty. The students are chosen by the incumbent members subject to the approval of the president of the University, and the faculty members are elected by the faculty.

## The Arts

The mission of the programs in the visual and performing arts at Valparaiso University is to educate students by opening their eyes and ears to the best of their artistic heritage and the joy of artistic expression. The University offers its students a range of arts opportunities through its general education curriculum; co-curricular activities in art, music, theatre, dance, and creative writing; and academic majors in the departments of visual and performing arts which permit students to make the arts the focus of a liberal education for personal and professional development and for creative leadership and service. At Valparaiso University, the arts serve primarily the students, while also serving the faculty and staff and the larger community of the region.

## Music

The Department of Music offers all students the opportunity to study and perform as singers and instrumentalists in an array of curricular and co-curricular ensembles. Students wishing to perform in selective ensembles may audition for the Valparaiso University Chorale, the University Symphony Orchestra, the Kantorei, Jazz Ensemble, and the Chamber Concert Band, as well as a variety of chamber ensembles including Woodwind Quintet, String Quartet, Percussion Ensemble, Brass Ensemble, and others. Other auditioned ensembles include: Men's Ensemble, Women's Choir, and Luce Band. The Community/University Concert Band is open to all students with no audition required. Additional student-organized performing groups include Crusader Band, Handbell Choir, Matins Choir, and various a capella singing groups. For an additional charge, a limited number of students may enroll in private music lessons in voice, piano, guitar, organ, and most orchestral and band instruments.

## Theatre

The University Theatre brings the best of classic drama, new plays, musicals, and operas to the Valparaiso University Center for the Arts. Theatre opportunities are available for any student interested in dramatic arts. Theatre work is focused in the areas of performance, production, management, and outreach theatre. Opportunities exist for advanced students to design, supervise, or manage in all areas.

## Art

The Art Department offers studio courses in painting, drawing, digital art, video art, design, graphic design, sculpture, photography, ceramics, art education, and art history. Student and faculty work, as well as the work of other distinguished artists, is exhibited in the Brauer Museum of Art, in the Strimbu Gallery on the second floor of the Center for the Arts, and in the second floor hallway gallery at the Christopher Center for Library and Information Resources. Art students have opportunities to develop publishing and production skills by working with The Lighter, The Torch, and other campus publications. Several internships are available to students on and off-campus. Summer programs of study in Europe or Asia are also available to provide students with immediate experience of diverse cultural heritages, in addition to all regular foreign studies programming during the academic year.

## Dance

Through learning and participating in dance, students are able to reflect on the ways dance is part of the human experience and part of their own lives. Each semester students may choose from a number of different dance courses offered through the Department of Theatre. Styles covered may include: ballet, tap, jazz, modern, and musical theatre styles.

## University Dance Ensemble

Under the leadership of Department of Theatre faculty, the University Dance Ensemble meets regularly throughout the academic year for technique classes and choreography. All University students are welcome to audition for the Dance Ensemble. Academic credit can be given for those students choreographing or performing in the annual Concert of Dance. Dance Ensemble auditions are held at the beginning of the fall semester.

## Creative and Professional Writing

The English Department offers majors and minors in creative and professional writing. The department sponsors the Margot Ann Uehling Scholarship, awarded annually for the best essay written by a Valparaiso University student. WORDFEST annually brings established writers to campus and awards prizes to Valparaiso University students for fiction, poetry, and nonfiction prose. The Cresset internship provides experience in editing and publishing. The Lighter, a biannual campus literary magazine, presents student work in award-winning form.

## Athletics

Valparaiso University provides a varied athletics program that assumes that sports can play a major role in college life by encouraging wide participation by the student body. The Athletics-Recreation Center and Fitness Center are major indoor facilities. Outdoor facilities include tennis courts, all-purpose intramural fields, and fields for varsity baseball, football, soccer, and softball. Although the University provides an experienced staff and takes every precaution to avoid injury to all participants in the intercollegiate and recreational sports programs, it assumes no responsibility for accidents; students participating in these activities do so at their own risk.

## Recreational Sports/Intramurals

Valparaiso University is committed to a comprehensive program of recreational sports. A wide variety of team and individual sports are scheduled throughout the academic year. Students are also encouraged to participate in the many informal recreational activities, special events, fitness classes, and clinics offered by the Recreational Sports staff.

## Intercollegiate Competition

Women's sports offered are: basketball, bowling, cross country, golf, soccer, softball, swimming, tennis, indoor and outdoor track and field, and volleyball. Membership is maintained in the National Collegiate Athletic Association Division I. The women's teams participate in the Horizon League and the Southland Bowling League.

Men's sports offered are: football, golf, basketball, baseball, soccer, cross country, swimming, tennis, and indoor and outdoor track and field. Membership is maintained in the National Collegiate Athletic Association Division I. The men's teams participate in the Horizon League and the Pioneer Football League, an NCAA FCS Conference.

## Publications and Broadcasting

Students are encouraged to work in any aspect of campus publications and broadcasting, including writing, editing, advertising, sales, photography, and layout. The student/faculty Committee on Media is responsible for the policies and regulations governing these activities.

## The Beacon

The Beacon, the University yearbook, is designed and edited by students. It offers experience in graphic design, photography, and editorial work and is open to students from all academic disciplines.

## The Lighter

The Lighter, a student literary magazine, is published twice a year and welcomes contributions from all members of the University student community. Art work, especially photography, is also a feature of this publication.

## The Torch

The Torch is the student newspaper. A weekly publication, it covers a wide range of campus activities and involves students interested in all aspects of journalism.

## VUTV

Valparaiso University Television provides students with hands-on training and experience in television production. Students can gain experience as producers, directors, camera operators, editors, and on-air talent for a variety of news, educational features, and entertainment programs for the campus community. No prior experience is necessary. Delivery is through campus cable channel 15 and a YouTube channel.

## WVUR

The campus radio station WVUR (95.1 FM) offers students the experience of on-air work, management, sports broadcasting, news and weathercasting, and various production work.

## Organizations

## Student Senate

The Student Senate is empowered by the Instrument for Internal Governance of the University with executive, legislative, and judicial powers over the student body. The Student Senate affords students the opportunity to assume the privileges and responsibilities of self-government. It also coordinates the major committees of Media, Residences, University Programming Council, Finance, and Administration.

## Committee on Media

The Committee on Media is responsible for policies and regulations of the University's student publications, as well as policies and regulations for the campus radio station, WVUR, the campus television station, VUTV, the campus newspaper, The Torch, the campus yearbook, The Beacon, and the student magazine for literature and art, The Lighter.

## Committee on Residences

The Committee on Residences is responsible for making recommendations regarding residence hall policies, procedures, and programs.

## Administration Committee

The Administration Committee recognizes and monitors all Student Senate recognized organizations.

## Finance Committee

The Finance Committee is responsible for developing and submitting a budget to the Student Senate and for reviewing all requests for special appropriations by student organizations.

## University Programming Council

The University Programming Council (UPC) is the student programming body and organizes many events annually. These events include social, recreational, and educational programs to broaden student interaction and enhance student life. UPC offers the UPComing Leaders program to all students interested in getting involved. Students will learn event planning, leadership, and interpersonal skills!

## Fraternities and Sororities

The fraternities and sororities govern themselves through their own constitutions and policies and collectively through the Interfraternity Council and the Panhellenic Council. The institution hosts fifteen inter/national fraternities and sororities with active chapters on campus. The sororities include: Chi Omega, Gamma Phi Beta, Kappa Delta, Kappa Kappa Gamma, Pi Beta Phi, and Sigma Lambda Gamma. The fraternities include: Lambda Chi Alpha, Phi Delta Theta, Phi Kappa Psi, Phi Mu Alpha Sinfonia, Phi Sigma Kappa, Pi Kappa Alpha, Sigma Chi, Sigma Phi Epsilon, and Sigma Pi.

Most of the fraternities have an off-campus chapter facility and sororities are housed in University-provided sorority housing. Fraternities and sororities offer a values-based student leadership experience and approximately $30 \%$ of undergraduate students are actively involved in a fraternity or sorority. For more information about the fraternity and sorority experience at Valparaiso University, please email greek.life@valpo.edu.

## Clubs and Interest Groups

Clubs and interest groups abound on the campus. They focus on a variety of activities including academic and professional interests, hobbies, recreational activities, cultural interests, activities connected with the chapel, religious interests, politics, and service projects. There are over 120 student organizations on campus. More information about student organizations may be found at www.valpo.edu/studentlife/activities.

## Volunteer Programs

The mission of Valparaiso University states that we will "prepare students to lead and serve in both church and society." Engagement in volunteer programs, community service, and civic engagement opportunities are ways in which mission fulfillment happens. Volunteer Programs offer a wide variety of opportunities for students to engage in one-time and longer-term community service programs. The University annually hosts a Welcome Week service project, the Valparaiso University Day of Caring in cooperation with the United Way, plans and implements a MLK Day Service Project, and works to support other philanthropy initiatives on campus such as Relay for Life, Dance Marathon, and Color for a Cause. Students interested in learning more about community service opportunities should email volunteer@valpo.edu or like the Valparaiso University Volunteer Programs Facebook page to be updated on all volunteer and community service opportunities.

## The Harre Union

The Harre Union serves as the community center for campus life, and is a welcoming and inviting environment for students, faculty, staff, the extended University family, and guests. The mission of the union is to provide and support a comprehensive program of social, recreational, spiritual, and educational activities and services that complement the mission of the University.

The union is the home to many student organizations, which include Student Senate and University Programming Council (UPC). The Student Organization Suite (open 24/7) is home to over 120 recognized student organizations that offer a wide variety of co-curricular opportunities that help students to become actively involved on campus. Student organizations offer opportunities for
students to enhance their leadership skills, learn more about their majors and fields of interest, develop lifelong friends, and have fun. The union staff offers advice and assistance regarding program development to all student organizations on campus.

The Union Administration Office oversees the daily operation of the Harre Union. The Event Manager processes reservations for meetings, conferences, events, summer camps, and special events in the union, as well as in a variety of academic buildings. The office compiles, prints, and distributes Cultural Arts Calendars to help keep the campus informed of cultural and art-oriented events. This calendar can also be found at the union website, valpo.edu/union. The union staff also plans and presents a number of major activities throughout the year, which include the annual Jazz Fest, many film offerings, drop-in programs and student performances, the Student Activities Fair, games and recreation tournaments, and much more.

The Harre Union Games and Recreational Area provides students a place to unwind and discover a variety of indoor recreational opportunities including billiards, table tennis, giant Jenga, Xbox, and foosball. The staff organizes a number of tournaments and leagues for students to join throughout the year. The center has camping gear, bicycles, racquet sports gear, and lawn games at low rental rates.

Dining options within the union include The Marion Breen Founders Table and the Campus Café. The Founders Table is the main dining room for the campus and includes a large variety of foods, including Naples style pizza; the Chef's Corner, with a variety of comfort foods; a large salad bar; a grill; a sandwich deli; Nuevo, specializing in a variety of Mexican burritos and tacos; and a pasta and panini corner. All items are prepared at each station. The Campus Café is a relaxed dining area, which includes a variety of hot foods, Grab-N-Go items, Perks coffee shop featuring Starbucks coffee and fresh baked cookies, muffins, and other desserts, as well as Freshen's salad and smoothie shop, and a convenience store for grocery items. Customers may use cash or credit cards and students may also utilize their meal plan account in both dining areas. The Café also includes a performance stage and television, and is open late night for students' dining needs.

The Union Welcome Desk is available to help in a variety of ways. Whether students need to purchase tickets, find a phone number, send a fax, or obtain a campus map or information, the Welcome Desk is eager to help. It also has magazines and daily newspapers available for students' reading enjoyment.

Other union services include a cash machine, email kiosks, televisions, audio/visual advertising screens of campus events, coin/card-operated copy machines, and information tables. In addition, the union has a 24/7 computer lab/lounge, wireless internet, and vending machines. The University Bookstore is also located in the Harre Union.

## Campus Ministry

Standing together at the center of campus, the Chapel of the Resurrection and the Christopher Center for Library and Information Resources express the University's belief in the creative relationship between faith and learning. The connection between Lutheran heritage and academic studies extends far beyond the classroom at Valparaiso University. Our students, faculty, staff, and alumni reach out from this center of liberal and professional learning with a sense of Christian vocation to serve not only the campus and Valparaiso community, but also in places around the world. This includes, but is not limited to, those who serve the church as ministers, educators, artists, musicians, and scholars. Nurses, engineers, and business professionals are also a major part of the connection between life and faith.

Centered in Christ, the ministry of the Chapel of the Resurrection proclaims God's love, serves students, faculty, staff, and the wider community, and welcomes all.

Worship at the Chapel of the Resurrection draws upon the gifts of Christians from across the centuries and around the world. Students, pastors, and other members of the University community shape each worship service through music and art, proclamation, and prayer.

The Chapel offers a service of Holy Communion every Sunday morning, year-round. When classes are in session, students can also worship at a Sunday evening service called Candlelight and at Celebrate, a mid-week contemporary service. The single most frequent worship opportunity is Morning Prayer, a 20-minute service that begins at 10:00 a.m. each class day. Worship styles change from day to day, season to season, with music ranging from ancient to contemporary. Morning Prayer is a time for students, faculty, and staff to gather as a community of faith, hear God's word, pray, and give praise. Other special services are also offered throughout the year, including Advent-Christmas Vespers, Ash Wednesday, Holy Week services, and more. All are welcome.

Students provide leadership in planning the majority of the Morning Prayer, Candlelight, and Celebrate services at the chapel. There are numerous opportunities for students to lead worship services, serve in choirs (including the Kantorei and handbell choirs), or support worship life in a variety of roles. Service opportunities are also available through the chapel's Social Action Leadership Team (SALT) and the Peer Ministry.

Peer Ministers serve as mentors, a caring presence, and role models to first year students, being available to peers, fostering relationships, creating program and spiritual growth opportunities, and connecting students in need of spiritual care with the
pastoral staff of the Chapel. Peer Ministers live in the freshman residence halls and are an integral part of both the Residential Life team and the chapel ministry.

All students are invited throughout the year to attend one of the spiritual retreats, which lead participants in the disciplines of prayer and spiritual discernment, especially in the area of life vocation. The University pastors are also available to all students for counseling.

The chapel works with a variety of ecumenical and parachurch partners on campus through the Campus Ministry Network.

## The Institute for Leadership and Service

The Institute for Leadership and Service is a program dedicated to preparing students for lives of leadership and service -- lives shaped by a sense of calling, equipped for thoughtful reflection, and responsive to the world's deepest challenges. Working closely with faculty, staff, alumni, and community partners, the institute supports courses, lunch conversations, speaker series, and summer fellowships that help students connect the dots between study, service, and future success. The institute is located in the Kathleen and Mark Helge Center.

## Services For Students

## Leadership Programs

The Student Affairs Division provides a number of leadership development opportunities for students at all levels of the institution. Student leaders are encouraged to participate in any of a number of workshops, seminars, academic courses, and training sessions offered each year to gain and develop their leadership skills and abilities. For more information on Leadership Programs please email leadership@valpo.edu.

## The Office of Multicultural Programs

The Office of Multicultural Programs (OMP) acts as a hub for diversity and inclusion on campus, with a focus on supporting underrepresented student populations. The OMP supports the student body and University community by concentrating on four key areas: leadership in diverse communities, education, celebration, and retention of underrepresented populations.

Having many diverse cultures represented on campus gives the OMP the chance to celebrate with our students. From Black History Month to Cesar Chavez Day, to the popcorn festival and parade, every student has the ability to celebrate his or her own culture or the culture of others. Students are given the opportunity to increase their appreciation of people and experiences that are vastly different from their own. VU students have the chance to celebrate the world we live in through their connections to fellow students and multicultural and multi-ethnic events and celebrations.

Students have the opportunity to lead through participation in cultural student organizations. The OMP advises four student organizations: Asian American Pacific Islander Coalition (AAPIC), Alliance (LGBTQ+), Black Student Organization (BSO), and Latinos in Valparaiso for Excellence (LIVE). All students are invited to be involved with these groups. Students that are involved will practice and refine the social, financial, and practical skills needed to lead in any diverse community.

To help retain underrepresented populations at VU, the OMP has developed, and features, two mentoring programs that work to ensure the persistence of all our students. "Smart Connections" is a strong peer-mentoring program that focuses on first-year students and connects them to an upperclassman in a big brother/sister style relationship. Students are matched 1-on-1 with a "pace setting peer" who is trained to help students get connected and navigate the first year. "Mentoring for Success" places students in a mentoring relationship with someone in their field of study or potential career field. This program gives students the opportunity to connect with VU Alums and other stakeholders in their field of interest, as they pave their pathway to a successful future.

## The Career Center

The Career Center is a comprehensive career services facility offering a wide array of services to students of all colleges, freshmen through seniors, as well as graduate students. Located in the Harre Union, the Career Center houses a career resource library, conference/workshop room, student interview lounge, private interview rooms, and staff offices.

Services include career counseling; cooperative education/internship information and orientation; workshops/programs, and graduate school and job search assistance. Resume and cover letter critiquing is available, as well as assistance with other job search tasks and career exploration.

On-campus interviews with a variety of employers also occur in the Career Center. Listings of entry-level, full-time, part-time, coop, internship, and summer job opportunities are posted on the Career Center's web site. A print and online career library assists students in formulating and implementing career and educational plans.

The Career Center offers an extensive mock interview program and an annual Networking Reception and Etiquette Dinner to help students polish their professional skills. Additionally, the Career Center hosts career and graduate fairs to help students connect with employers and graduate programs.

The Career Center hours are 8 a.m. to 5 p.m., Monday through Friday. Appointments with a professional staff member may be made in person or by calling 219-464-5005. The website for the Career Center is valpo.edu/career-center.

## Counseling Center

The services provided by the Counseling Center emphasize both the promotion of wellness and personal growth, and the remediation of problems of individuals and groups of the University. The services of the center are confidential and free of charge. Specifically, the Counseling Center offers individual and group counseling sessions for persons with emotional, interpersonal, family, or academic skills problems; psychological testing of personality and personal development; education and training on a wide variety of helpful life skills; a website and resource area containing personal development materials; a stress reduction training room; crisis intervention; and consultation services. The Counseling Center is staffed by psychologists, counselors, social workers, a consulting psychiatrist, a consulting psychiatric nurse practitioner, and support personnel. The counseling relationship is founded on respect for the individual and belief in his or her potential for growth. In the counseling process, the student and the professional work collaboratively to set and achieve mutually agreed upon goals. Choice and responsibility by the individual are emphasized. The Counseling Center's Outreach Program includes the provision of presentations, seminars, and workshops on topics related to mental health and wellness.

The Counseling Center hours are 8 a.m. to noon and 1 p.m. to 5 p.m. Monday through Friday. The center is located at 1602 LaPorte Avenue on the north side of Alumni Hall. Appointments can be made in person or by calling 219-464-5002. Individual counseling is available to all full-time students. Outreach programs and the stress reduction room are available to all. The website for the Counseling Center is valpo.edu/counseling-services, and the email address is Counseling.Center@valpo.edu.

## Sexual Assault Awareness and Facilitative Education Office

The Sexual Assault Awareness and Facilitative Education (SAAFE) Office provides advocacy services to individuals of all gender identities who are inquiring regarding a Title IX related issue. Title IX violations include sexual assault, sexual harassment, stalking, dating violence, and domestic violence. The SAAFE Office meets with students at their request, and provides the student with information about their rights, resources, and options in dealing with Title IX violations, and offers support to students in their decision making process. All of this occurs with strict confidentiality. The SAAFE Office also provides support services for those who experience sexual violence, as well as friends and family of the student. The office offers individual and group crisis counseling related to gender, sex, and relationship issues. The SAAFE Office trains students in a variety of topics in their work of sustaining a culture of respect across genders as a means to broaden awareness of gender identities, sexual and relationship issues, and to aid in the prevention of and response to sexual assault, harassment, stalking, dating, and domestic violence.

The SAAFE Office provides multiple student-led services. SAAFE advocates provide outreach programs for students through various campus sponsored programs and events. All student organizations and campus groups may request a variety of outreach programs and facilitations ranging from informational to interactive workshops and related subjects. There are SAAFE Resource Ambassadors who offer written materials, access to helpful resources, websites, program and educational powerpoints, Prezi, and animated videos to students. There are SAAFE and Empowering Organizations (SEO)- Athletics Division and SAAFE and Empowering Organizations (SEO)- Greek Division. Each of these organizations works to sustain a culture of respect between and across genders. Check SAAFE's website for further information on programs offered by these organizations.

To schedule an appointment with SAAFE, please call 219.464 .6860 or email Paula.Dranger@valpo.edu. The SAAFE Office is located on the LaPorte Avenue side of Alumni Hall. The website for SAAFE is valpo.edu/counseling-services/sexual-assault-awareness-facilitative-education and the email address is SAAFE.Office@valpo.edu. Emergency access is available 24 hours a day, 7 days a week by calling 219.929.7087.

## Office of Alcohol and Drug Education

The Office of Alcohol and Drug Education (OADE) provides substance abuse prevention efforts on campus through proactive outreach programs to student residences and organizations by means of peer educators and professional staff. It also offers education to at-risk students through the combined efforts of a referral, assessment, and group program. A licensed Masters-level mental health clinician provides screening and referral services to those experiencing problems with substance abuse, whether those problems lie in themselves or in those close to them.

To schedule an appointment with OADE, please call 219.464 .6820 or stop by between 8 a.m. and 5 p.m. Monday through Friday. The OADE office is located in Counseling Services. The website for OADE is valpo.edu/counseling-services/office-of-alcohol-drug-education and the email address is OADE.Office@valpo.edu.

## The Valparaiso University Student Health Center

The Student Health Center provides professional health care and educational wellness programs for full-time undergraduate, graduate, law, international, and Interlink students. The Student Health Center is open 8 a.m. to noon and from 1 p.m. to $4: 30$ p.m. Monday through Friday during the fall and spring semesters. During the summer, the Student Health Center is open from 8 a.m. to noon. Appointments are recommended. Walk-ins are taken as time permits.

All visits to the Student Health Center are confidential. No medical information will be released without written authorization from the patient, except in rare instances, as specified by law.

Services include evaluation and treatment by a nurse practitioner and/or physician. Wellness screenings, immunizations, immunotherapy, and laboratory services are also offered.

Students are required to carry their own comparable health insurance or purchase health insurance sponsored by the University that covers the student in the Valparaiso area. On an annual basis, all domestic full-time undergraduate, graduate, and all law students will be required to either provide their existing health insurance information or enroll in the University-sponsored plan through an on-line process. Students who take no action by the first day of Fall semester will be automatically enrolled in and billed for the University-sponsored plan. All international students will be automatically enrolled in and billed for the University-sponsored plan except for students from sponsoring countries that provide health insurance.

The services provided by the Student Health Center will be billed to the student's health insurance. Students and/or their legal guardian are responsible for the costs of treatment not covered by the student's health insurance. This remaining cost is applied to the student's account and can be paid on-line or in person.

## Valparaiso University Health Form

To attend Valparaiso University, all full-time students are required to have on file at the Health Center, a completed Valparaiso University Health form. This form requires documentation of completed immunizations and TB screening/testing information. Only health records in English or health records accompanied by certified translations into English will be accepted. A student is not considered in compliance with the University until his/her Health form has been reviewed and approved by Health Center staff. A hold will be placed on the student's account if the health form is not received and approved prior to the start of his or her first semester.

Any Valparaiso University student who changes to full-time status from part-time status must meet the above requirements. Full-time students who take a full semester off (excluding summer) will have his or her health record reviewed by Health Center staff, and must meet current requirements. Certain colleges and programs within the University may have additional health-related requirements, i.e. Athletics and the College of Nursing and Health Professions.

For more information, please visit the Student Health Center website at valpo.edu/student-health-center.

## The Academic Success Center

The Academic Success Center serves all students in achieving academic success. It serves as a referral system for campus-wide academic support services and resources including: tutoring, help sessions, mentoring, academic advising, the Career Center, Disability Support Services, and the Writing Center. The ASC provides a web-based directory and phone referrals for students to secure various kinds of academic assistance available in departments, professional colleges, learning centers, and other campus offices. Additionally, the ASC coordinates the Peer Tutoring Program and the Strategies for Academic Success course (GS 100). ASC is a key resource for students who need help in achieving their academic potential. The Academic Success Center is located in the Christopher Center Library, Room 110, on the lower level. To secure referrals for use of any of the above services, call 219-464-5985, or email Academic.Success@valpo.edu. For more information about these services and to access the web-based directory, visit valpo.edu/academic-success-center.

## Tutoring

The ASC provides information about tutoring services available in a variety of forms and venues across campus.

1. Work with the professor-The first option for help in a course is for the student to work directly with the professor. Frequently, simple problems in handling coursework can be resolved by speaking to the professor.
2. Group and individual help sessions-Besides seeking help from the professor, the student should also seek help provided by departments, colleges, and learning centers. Many departments have undergraduate teaching assistants and student aides who provide group help sessions and individual tutoring for first and second year courses free of charge to students. Professional colleges also arrange academic support in conjunction with particular courses, and the University's learning centers offer group and individual learning assistance.
3. One-on-one peer tutoring-If these course-level help sessions provided by departments are not available or have not met the need, then students can seek the help of a peer tutor for a specific course by submitting a request form on the ASC web site. The ASC hires and assigns peer tutors for undergraduate and bridge students. Peer tutors have successfully completed the courses for which they provide tutoring and are recommended by professors.
4. Study groups-Students are also encouraged to gather in small groups and work with each other in mastering class problems. This reinforces points from daily lectures and supports good study habits. On occasion, the ASC will hire a peer tutor to lead a study group. The tutor is selected at the professor's recommendation, has successfully completed the course, and/or is a major in the discipline.

All students should feel welcome to contact the Academic Success Center. The tutoring sessions arranged by the ASC uphold the standards set by the University's Honor Code. It is the student's responsibility to abide by what is authorized and unauthorized aid in a particular course.

## Academic Advising

Valparaiso University strives to empower students to reflect on their vocations, take ownership of their education and professional development, and to lead and serve in the ever-changing global community. Academic advising provides information about higher education processes, procedures, and program expectations. Entering students are assigned to an academic advisor to assist them in selecting a curriculum, meeting University requirements, and making the most of their studies.

Students who have not declared a major are assigned an exploratory advisor; however, as soon as students declare a major, they are assigned to an advisor.

All students must meet with their academic advisors before students may register for classes each semester. The advising meeting indicates only that advisors have counseled the student on the best course selection to progress to degree attainment. Students should use the program evaluation (degree audit) option on DataVU to track their graduation requirements.

## Disability Support Services

Valparaiso University, through its mission statement, strives to maintain a supportive environment which will promote the learning and well-being of all students. The following information is provided to assist those students with disabilities who are seeking academic accommodations and support.

The student must have met all qualifications for admission and be officially admitted to the University prior to seeking support services provided by Disability Support Services. Inquiries should be directed to Zebadiah Hall, director of Disability Support Services, at 219.464.6496 or by email at Zebadiah.Hall@valpo.edu.

The University is committed to meeting its obligation to provide effective auxiliary aid and assistance to students with disabilities. The provision of auxiliary assistance is primarily the responsibility of the Department of Rehabilitation Services of the state in which the student maintains legal residence. If the request for assistance is denied by the local agency, Valparaiso University's provision of accommodations will be based upon a case by case analysis of an individual student's need and his/her eligibility under the ADA and Section 504 of the Rehabilitation Act of 1973 and its regulations.

In order to be considered for accommodations, the student:

1. May, but is not required to, apply to his/ her local Department of Rehabilitation Services Office before attending Valparaiso University, or as soon as is reasonably possible upon diagnosis of a disability, in order to allow time for funding to be allocated. Upon request, the University will assist in the application.
2. Should be admitted to one of the colleges of the University.
3. Must submit a written diagnosis of the disability and its impact on learning from appropriate professional personnel.
4. Should notify the director of Disability Support Services in writing before the first day of classes, or as soon as is reasonably possible upon diagnosis of a disability. Such notice is required to determine eligibility and to give the various academic and service areas a reasonable period of time to plan to meet the individual's special needs.
For further information, please refer to Valparaiso University's Disability Support Services website: valpo.edu/disability-support-services.

## The Writing Center

At the Writing Center, undergraduate and graduate students discuss writing projects with trained, experienced writing consultants. We offer free individual peer consultations and workshops on writing to support undergraduate and graduate students in their development as writers. In our sessions we provide strategies and guidance on writing assignments from any discipline, at any stage in the writing process, and for writers at all skill levels. Our goal is to help you become a credible, confident writer.

Go to valpo.mywconline.com to make an appointment - you will need to register first. Graduate students, please make appointments only with graduate or undergraduate/graduate tutors in the Writing Center. Undergraduate and graduate students may also drop in since walk-in appointments are also sometimes available. Please visit our website at valpo.edu/writingcenter for additional contact information and resources. We look forward to seeing you!

## International and Graduate Student Support

Writing consultants work closely with international students and visiting scholars, whether in their first courses on campus, or in the MBA, School of Law, or other graduate program. Tutors with experience in working with ELL students are available.

## Hours and Location

Consultants are available Monday through Thursday, 10:30 a.m. to 8 p.m. and Friday, 10:30 a.m. to 5 p.m. Saturday hours are also available. We are closed on Sundays. Summer hours vary. We are located on the first floor of the Christopher Center, close to the IT Help Desk, and Grinders.

## Graduate Tutoring

Graduate content tutoring is coordinated with program directors and made available across program content areas to serve the academic needs of all graduate students. Tutoring is provided in a location that is determined by the program director and the instructor of the course in which tutoring is being provided. The "Fourth-Hour" tutoring option is specifically available to international students taking introductory courses to help cultivate and develop professional vocabulary and spoken English language proficiency within a specific discipline. If a graduate student expresses interest in additional one-on-one tutoring for a particular class, an attempt will be made by the Graduate School to find someone to help.

Graduate faculty and students are available to assist graduate students, and on-line writing assistance may be available.

## Strategies for Academic Success (GS 100)

This course is designed for students who want to enhance their college academic life by strengthening their learning strategies, learning styles and preferences, time management, goal setting, motivation, note taking methods, test-taking skills, reading strategies, critical thinking and writing, thesis sentences, overcoming procrastination, reducing stress and test-anxiety, and general study techniques. This course is coordinated through the Academic Success Center, is offered in the fall and spring semesters, and is appropriate for all students who desire to enhance their academic performance. Freshman students may find the fall course particularly helpful as they make the transition to college life. Please see page 64 for the course description and other general studies course offerings.

## College of Arts and Sciences



Dean Jon T. Kilpinen, Ph.D.
Assistant Dean Nancy M. Scannell, M.A.
Assistant Dean Anna R. Stewart, Ph.D.

The College of Arts and Sciences, the largest college of the University, consists of 23 departments, provides the majority of the General Education requirements, and entails advanced work in the liberal arts, the sciences, and in several professional areas.

Each degree in the College consists essentially of three parts:

1. The General Education component;
2. The major field or interdisciplinary program.
3. Elective courses, often including a minor or minors

## General Education

An overview of the General Education Program is presented on page 10 with variations specified in the detailed presentation of degree requirements below.

## The Major Field

Each student must complete a major field of study or an interdisciplinary program. Ways of meeting this requirement are presented in detail in connection with the degree requirements listed below. These options are intended to offer maximum flexibility so that students may find the courses of study best fitted for their interests and needs.

## Degrees and Degree Requirements

## Associate of Arts Degree ( 61 Cr.)

A. General Education Requirements$39-40 \mathrm{Cr}$.This degree is available only to students enrolled in the College of Adult Scholars.

1. CORE $\mathbf{1 1 0}$ The Human Experience ..... 5 Cr .
2. CORE 115 The Human Experience ..... 5 Cr .
3. THEO $\mathbf{2 0 0}$ The Christian Tradition ..... 3 Cr .
4. Cultural Diversity ..... 11 Cr .
Foreign Language (one) ..... 8 Cr .
Cultural Diversity course ..... 3 Cr .
5. Humanities ..... 6 Cr.
Two of the following options:
Fine and Performing Arts ..... 3 Cr .
A literature course numbered 200 from English, Foreign Languages, or Theatre ..... 3 Cr .
A History course ..... 3 Cr .
A Philosophy course (except 145/245) ..... 3 Cr.
6. Social Sciences (from two different subject areas) ..... 6 Cr.
7. Natural Science (with lab) ..... 3-4 Cr.
College of Adult Scholars students who have completed Level II of a foreign language in high school but have not studied that language for at least 6 full years may be allowed to count credit earned for level 101 toward the foreign language requirement (see section beginning on page 144). Students opting for a different language from their high school experience begin with course 101 in the new language.
B. Concentrations
Beyond completing the general education requirements, students elect one of the following concentrations. Coursework used to meet general education requirements for the A.A. degree may not be used to meet concentration requirements.
8. Culture and Humanity
21 credit hours drawn from at least two of the following subjects: English (ENGL), History (HIST), Philosophy (PHIL), Theology (THEO), or Classical Civilization (CLC).
9. Social and Behavioral Science
21 credit hours from at least two of the following subjects: Economics (ECON), Political Science and International Relations (POLS), Psychology (PSY), Sociology (SOC), and approved courses in Geography (GEO 101, 102, 200, 210, 274, 301 and approved 490)
10. Communication and Expressive Arts
21 credit hours from at least two of the following subjects: Art (ART), Foreign Languages (FL), Communication (COMM), Music (MUS), the Theatre (THTR)
From these concentrations, a student may construct the equivalent of an academic minor or, with additional coursework, an academic major that may be applied toward the requirements for the B.A. degree.

## Associate of Science Degree ( 60 Cr .)

| A. General Education Requirements |  |  |
| :---: | :---: | :---: |
| 1. | First Year Core | 10 Cr . |
|  | CORE 110 The Human Experience | 5 Cr . |
|  | CORE 115 The Human Experience | 5 Cr . |
| 2. | Social Science | 3 Cr . |
| 3. | Health and Wellness | 1 Cr . |
| One of the following options: |  |  |
|  | KIN 100 Healthy Lifestyles | 1 Cr . |
|  | KIN 101 Wellness and Stress | 1 Cr . |

B. Major Field Requirements

At least 30 credit hours in Natural Science and Mathematics. Students preparing for admission to one of the allied health fields should develop an appropriate program of study with the Associate Degree advisor.
C. Other Requirements

1. The following work must be completed in residence at Valparaiso University:
a. 30 of the last 34 credit hours for the degree
b. At least 15 credit hours in Natural Science and Mathematics
c. THEO 200
2. The student must earn a cumulative grade point average of 2.00 on all work in residence and on courses in Natural Science and Mathematics taken in residence.

An Associate in Science degree with concurrent cytotechnology certification may also be obtained. See page 59.

## Bachelor of Arts Degree (124 Cr.)

A. General Education Requirements

1. First Year Core 10 Cr .

CORE 110 The Human Experience 5 Cr .
CORE 115 The Human Experience 5 Cr .
2. Theology 6 Cr .

THEO 200 The Christian Tradition 3 Cr.
One 300-level Theology course 3 Cr.
3. Writing Intensive Course $3 \mathbf{C r}$.

At least one course identified as a writing intensive (WI) course. This course may also be counted as partial fulfilment of another general education requirement. Sophomore standing recommended.
4. Cultural Diversity 11 Cr.
$\begin{array}{ll}\text { a. Foreign Language } & 8 \mathrm{Cr} \text {. }\end{array}$
Course number 102 in a foreign language in which the student has no more than one year of high school credit, or course number 203 in any foreign language. A student who has completed a second year language course in high school will not be granted credit toward degree requirements for level 101 in that language at Valparaiso University. International students whose native language is not English and who are studying on a nonimmigrant visa are exempt from the foreign language requirement provided that they have successfully completed ENGL 101, ENGL 102, ENGL 103, or ENGL 200, Literary Studies.

b. Cultural Diversity course

1) Three credits of a diversity course(s) from a specified list of approved courses. This course cannot be applied simultaneously towards fulfillment of any other General Education requirement with the exception of the writing intensive course requirement.
2) A semester abroad in one of the International Study Programs, the Chicago Urban Studies Semester, or the Washington Semester Program.
5. Humanities 6 Cr .

Two of the following options:
a. Fine and Performing Arts 3 Cr.

A designated historical/critical or creative/performance course in Art, English, Foreign Languages, Music, Philosophy, or Theatre
b. A History course 3 Cr.
c. A literature course numbered 200 or above from English, Foreign Languages, or Theatre 3 Cr.
d. A Philosophy course (except PHIL 145/245) 3 Cr.
6. Social Sciences 6 6r.

Two three-credit courses from two different subject areas in the social sciences: Economics, Gender Studies, Geography courses listed specifically as Social Science courses, Political Science and International Relations, and Sociology
7. Natural Sciences

Two courses of at least three credits each, for a total of at least six credits; each course must have a laboratory component and be selected from two of the following subject areas: Astronomy, Biology, Chemistry, Physical Geography, Meteorology, Natural Science (NS), Physics, and Psychology.

8. Quantitative Analysis

One designated Quantitative Analysis course of at least three credits

This requirement can be fulfilled by approved courses in either the major or minor field, but a course cannot
be applied simultaneously towards fulfillment of this requirement and any other General Education
requirement with the exception of the writing intensive course requirement.
9. Health and Wellness 1 Cr .

One of the following options:
KIN 100 Healthy Lifestyles 1 Cr .
KIN 101 Wellness and Stress $\quad 1 \mathrm{Cr}$.
B. Major Field Requirements

Students may fulfill the major field requirements of the Bachelor of Arts degree by completing either a
Departmental Major or an Individualized Major and by meeting one of the completion requirements listed below;
or by completing an Interdisciplinary Program (see page 50).

## Departmental Major

In order to fulfill requirements under the Departmental Major, students must complete a minimum academic major but may not exceed 60 credits in any one subject. For a list of the academic fields of study, see page 11.

## Individualized Major

An approved individualized major of thirty credit hours may be presented instead of the departmental majors listed above. This major is intended for students with clearly defined academic or career objectives who feel that their specific needs are not met by the departmental major option nor by the interdisciplinary program option described below. A student in the College of Arts and Sciences may propose a plan for an individualized major, using the form available in the Office of the Registrar section of valpo.edu. The major must satisfy the following conditions.

1. The proposed major must include at least 30 credit hours but not more than 48 credit hours chosen from two or more departments.
2. None of the courses chosen may be courses used to meet the General Education Requirements.
3. The proposed major must be supported and supervised by a faculty advisor.
4. A comprehensive statement by the student justifying the major must accompany the Individualized Major form. This form must list the specific courses to be taken and be signed by the student and the faculty supervisor before it is presented to the Dean's Office for approval. Any revisions must also be approved by the dean of the college.
5. The proposed major must be submitted to the dean of the College of Arts and Sciences for approval, preferably by the beginning of the junior year, but no later than the deadline for filing for degree candidacy.
The selection of courses for the individualized major should reflect serious deliberation on the part of the student and advisor. Normally, the individualized major will not include lower division courses or courses of an introductory nature.

The individualized major may be freely substituted for a departmental major in any of the various combinations available to students in meeting major requirements for the Bachelor of Arts degree. Courses taken for this major may not be counted for credit toward a minor or a second major.

Students may not pursue Honors Work as part of an individualized major.

## Completion of Major Field Requirement

In addition to completing either a departmental or an individualized major, students must complete one of the following:

1. An academic minor. The faculty recommends that minors be selected that are correlated to the major. No course may be used to fulfill two majors or both a major and a minor requirement except with the permission of the dean of the college. This restriction refers to courses within the major or minor field, not to additional courses required from outside of the major or minor field.
2. An approved individualized minor. 15 credit hours may be presented in lieu of the departmental minor. At least 9 credit hours must be taken beyond the introductory level. None of the courses chosen may be courses used to meet the General Education Requirements. Forms for individualized minors are available in the Dean's Office. A student may not graduate with both an individualized major and an individualized minor as the method of fulfilling major area graduation requirements.
3. A second academic major. A second major may be chosen from Departmental Major options or an interdisciplinary program. An approved individualized major may also be presented in fulfillment of requirements of a second major, unless the first major is also an individualized major. Only one individualized major or minor may be applied to the major field requirement.
4. A complementary major. A major which enhances and expands a first major. This major may not be a first major.
5. A first major with at least forty credit hours. However, no more than sixty credit hours from one subject area may be applied toward the $\mathbf{1 2 4}$ required for graduation. Students may not complete an individualized major of forty credits or more to satisfy the major field requirement. The limitation does not apply to students pursuing the Bachelor of Music or Bachelor of Music Education degrees, or the Bachelor of Physical Education degree with a major in Teacher Education.
6. An interdisciplinary minor, see listing below.

## Interdisciplinary Programs

The College of Arts and Sciences offers six interdisciplinary programs of study which students may pursue instead of the major options outlined above. These programs are coordinated by special administrative committees composed of faculty members drawn together by their interest in a particular subject not defined by boundaries of the traditional academic disciplines. Interdisciplinary Programs are currently offered in Actuarial Science, Chinese and Japanese Studies, Data Science, Environmental Science, International Economics and Cultural Affairs, Global Service, Latin American/Latino Studies, and a complementary major in Theology and Ministry.

In addition, minors in interdisciplinary programs in Applied Statistics, Business Administration, Business Analytics, Cinema and Media Studies, Environmental Studies, Ethnic Studies, Forensic Science, Fundamentals of Business, Gender Studies, Human Aging, Peace and Social Justice Studies, Philanthropic Leadership and Service, and Urban Studies may be added to departmental majors.

## Bachelor of Liberal and Professional Studies Degree (124 Cr.)

Students enrolled through the College of Adult Scholars program may choose to complete the Bachelor of Liberal and Professional Studies degree, which builds upon the Associate of Arts degree and its concentration options.

In addition to meeting the requirements for the Associate of Arts degree, students must complete the following:

| A. | General Education Requirements | 4 Cr . |
| :---: | :---: | :---: |
|  | Quantitative Analysis | 3 Cr . |
| One of the following options: |  |  |
|  | KIN 100 Healthy Lifestyles | 1 Cr. |
|  | KIN 101 Wellness and Stress | 1 Cr . |
|  | LS 489 Professional and Career Development | 1 Cr . |
| B. | Liberal Arts Interdisciplinary Core | 12 Cr . |
|  | LS 430 Senior Seminar in Natural Sciences and Interpretation | 3 Cr . |
|  | LS 450 Senior Seminar in Religion, Culture and Value | 3 Cr . |
| Two of the following options: |  |  |
|  | LS 410 Senior Seminar in the Humanities | 3 Cr . |
|  | LS 420 Senior Seminar in the Social Sciences | 3 Cr . |
|  | LS 440 Senior Seminar in the Fine Arts | 3 Cr . |
| C. | Major | 30 Cr . |
|  | Students take three additional courses ( 9 Cr .) in their Associate of Arts concentration to complete a major. Coursework for this major draws from the same departments as the Associate of Arts concentrations, and the major is designated with the same nomenclature (Culture and Humanity, Social and Behavioral Science, or Communication and Expressive Arts). As an alternative, the student may select the 30 -credit Individualized Major as described on page 50. |  |
| D. | Professional Studies Core | 18-21 Cr. |
|  | Students complete the Fundamentals of Business Minor as described on page 371 or the Professional Studies Minor. Students choosing the Professional Studies Minor take coursework in five competency areas and complete an integrative project. |  |

## Professional Studies Minor (16-21 Cr.)

|  | Communication | kills | 3 Cr . |
| :---: | :---: | :---: | :---: |
| One course from the following options: |  |  |  |
|  | COMM 145 | Interpersonal Communication | 3 Cr . |
|  | COMM 243 | Public Communication | 3 Cr . |
|  | ENGL 210 | Introduction to Business and Professional Writing | 3 Cr . |
|  | Leadership and Team Building |  | 3 Cr . |
|  | One course from the following options: |  |  |
|  | COMM 311 | Organizational Communication | 3 Cr . |
|  | COMM 345 | Leadership Communication | 3 Cr . |
|  | GS 220 | Contemporary Issues in Philanthropy and Service | 3 Cr . |
|  | LS 421 | Global Leadership and Team Development | 3 Cr . |
|  | MGT 315 | Leadership and Interpersonal Skills* | 3 Cr . |
|  | POLS 360 | Public Administration* | 3 Cr . |
| 3. | Resource Management |  | 3 Cr . |
|  | One course from the following options: |  |  |
|  | ACC 205 | Financial Accounting | 3 Cr . |
|  | BLAW 104 | Legal Environment of Business* | 3 Cr . |
|  | ECON 136 | The Economics of Health, Education, and Welfare | 3 Cr . |
|  | ECON 221 | Principles of Microeconomics | 3 Cr . |
|  | FIN 282 | Personal Finance* | 3 Cr . |
|  | GEO 321 | Urban and Regional Planning* | 3 Cr . |
|  | MKT 304 | Marketing Management* | 3 Cr . |
|  | PSY 270 | Introduction to Industrial/Organizational Psychology* | 3 Cr . |
| 4. | Human Relations and Diversity |  | 3 Cr . |
|  | Three credits from the following options: |  |  |
|  | ECON 233 | Economics of Race and Gender | 3 Cr . |
|  | ENGL 344 | Sociolinguistics: Language Across Cultures | 3 Cr . |
|  | GS 201 | Facilitator Training for Study Circles* | 1 Cr . |
|  | LS 422 | Intercultural Communication | 3 Cr . |
|  | LS 489 | Professional and Career Development | 1 Cr . |
|  | MGT 304 | Management and Organizational Behavior* | 3 Cr . |
|  | PHIL 120 | Culture, Identity, and Values | 3 Cr . |
|  | SOC 210 | Contemporary Social Problems | 3 Cr . |
|  | SOC 275 | Systems of Social Stratification | 3 Cr . |
|  | SOCW 260 | Diverse Populations: Human Rights and Justice | 3 Cr . |
| 5. | Using Technology |  | 3 Cr . |
|  | Three credits from the following options: |  |  |
|  | ART 230 | Graphic Design I | 1+4, 3 Cr . |
|  | CE 151 | Introduction to Computer-Aided Drafting | 0+3, 1 Cr . |
|  | COMM 110 | Internet Communication | 3 Cr . |
|  | COMM 230 | Graphic Design I | 1+4, 3 Cr . |
|  | COMM 401 | Social Media | 3 Cr . |
|  | CS 115 | Computers and Computation* | 3 Cr . |
|  | CS 128 | Introduction to Programming* | 1-2 Cr. |
|  | CS 157 | Algorithms and Programming* | 2+3, 3 Cr . |
|  | CS 210 | E-Commerce and E-Business Technology* | 3 Cr . |
|  | DATA 151 | Introduction to Data Science | 2+3, 3 Cr . |
|  | ENGL 310 | New Literacies, Technologies, and Cultures of Writing* | 3 Cr . |
|  | GE 290 | Issues in Technology | 3 Cr . |
|  | GEO 215 | Introduction to Geographic Information Systems | $3+2,4 \mathrm{Cr}$. |
|  | GEO 225 | Digital Cartography and GPS | 2+2, 3 Cr . |
|  | IDS 115 | Business Applications for Decision Making | 3 Cr . |

6. Capstone Integrative Project 1-6 Cr.

At least one credit from the following options:

| GS 386 | Internship (or an equivalent departmental internship) | $1-6 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| GS 390 | Special Topics (as approved by committee) | 1 Cr . |
| LS 485 | Practicum | 3 Cr . |
| LS 495 | Integrative Project in Liberal and Professional Studies | 3 Cr . |
| CPED 381 | Cooperative Education I | $0.5-3 \mathrm{Cr}$. |
| CPED 382 | Cooperative Education II | $0.5-3 \mathrm{Cr}$. |
| CPED 383 | Cooperative Education III | $0.5-3 \mathrm{Cr}$. |

*Courses marked with an asterisk have prerequisites.

## Bachelor of Music Degree (128-136 Cr.)

To be eligible for the Bachelor of Music degree, students must complete the required curriculum for the program area. In addition, they must pass all performance tests set for them by the Department of Music. They must earn 136 credit hours for the Church Music program or 128 credit hours for the Composition or Performance program. They must maintain a grade point average of 2.00.

Two options are offered the student in the church music program: organ and voice. Each student is expected, however, to acquire sufficient skill in organ performance and choral directing to assume a position as a qualified parish musician.

## A. General Education Requirements

For details see Bachelor of Arts degree.

1. First Year Core 10 Cr .
2. Theology 6 Cr .
a. THEO 200 The Christian Tradition 3 Cr .
b. One 300-level Theology course 3 Cr .
3. Writing Intensive Course 3 Cr.
4. Cultural Diversity 11 Cr .
a. Foreign Language 8 Cr .
b. Cultural Diversity Course 3 Cr.
5. Humanities 6 Cr.

Two courses, one each from two different areas:
a. Fine and Performing Arts
b. History 3 Cr.
c. Literature 3 Cr.
d. Philosophy 3 Cr
6. Social Sciences 3 Cr.
7. Natural Sciences 3-4 Cr.
8. Quantitative Analysis 3-4 Cr.
9. Health and Wellness 1 Cr.

One of the following options:
a. KIN $\mathbf{1 0 0}$ Healthy Lifestyles 1 Cr.
b. KIN 101 Wellness and Stress $\quad 1 \mathrm{Cr}$.
B. Music Requirements

The requirements for the major fields are given beginning on page 216.

## Bachelor of Music Education Degree (132-136 Cr.)

To be eligible for this degree, students must complete the curriculum described below. In addition, they must pass all performance tests set for them by the Department of Music. They must have a grade point average of 2.50 . In addition to meeting the music requirements for the Bachelor of Music Education degree, each student must be formally admitted into the Teacher Education Program and the Professional Semester. See requirements listed in the Department of Education under Secondary Education, page 119.
A. General Education Requirements

For details see Bachelor of Arts degree.

1. First Year Core 10 Cr .
2. Theology 6 Cr .
a. THEO 200 The Christian Tradition 3 Cr.
b. One 300-level Theology course 3 Cr.
3. Writing Intensive Course 3 Cr.
4. Cultural Diversity 3 Cr.
a. ED 470 Diversity, Equity, and Education 3 Cr .
5. Humanities 3 Cr.

One of the following options: $\quad 3 \mathrm{Cr}$.
a. History 3 Cr.
b. Literature 3 Cr.
c. Philosophy 3 Cr.
6. Social Sciences 3 Cr.
a. ED 206 School and Society 3 Cr.
7. Natural Sciences 3-4 Cr.
8. Quantitative Analysis 3-4 Cr.
9. Health and Wellness 1 Cr.

One of the following options:
a. KIN $\mathbf{1 0 0}$ Healthy Lifestyles 1 Cr .
b. KIN 101 Wellness and Stress $\quad 1 \mathrm{Cr}$.
B. Other Required Courses

1. PSY 110 General Psychology 3 Cr .
2. COMM 243 Public Communication 3 Cr .
C. Professional Education Requirements
3. ED 206 School and Society 3 Cr.
4. ED 304 Educational Psychology 3+0, 3 Cr.
5. ED 350 Seminar: Introduction to the Profession of Teaching 0 Cr .
6. ED 357 Designing Curriculum, Assessment, and Learning Plans 3 Cr .
7. ED 360 Literacies Across the Content Areas 3 Cr .
8. ED 407 Media Literacy and Critical Praxis 3 Cr.
9. ED 451 Seminar: Efficacy in Professional Practice 1 Cr.
10. ED 452 Seminar: Praxis Reflection 1 Cr.
11. ED 459 Supervised Teaching in the Secondary School Subjects 12 Cr .
12. ED 470 Diversity, Equity, and Education 3 Cr .
13. MUS 489 School Music II 3 Cr .
14. SPED 440 Learning Exceptionalities 3 Cr .
D. Music Requirements

The requirements of the major field are given on page 218.

## Bachelor of Science Degree (124 Cr.)

## A. General Education Requirements

For details see Bachelor of Arts degree.

1. First Year Core 10 Cr.
2. Theology 6 Cr.
a. THEO 200 The Christian Tradition 3 Cr.
b. One 300-level Theology course 3 Cr.
3. Writing Intensive Course 3 Cr.
4. Cultural Diversity 3-4 Cr.

One of the following options:
a. Foreign Language 203 or higher 4 Cr.
b. Cultural Diversity course 3 Cr .
5. Humanities 6 Cr .

Two courses, one each from two different areas:
a. Fine and Performing Arts 3 Cr .
b. History 3 Cr .
c. Literature 3 Cr .
d. Philosophy 3 Cr .
6. Social Sciences 6 Cr.
7. Natural Sciences 6-8 Cr.
8. Quantitative Analysis (MATH 124 or 131) 4 Cr.
9. Health and Wellness 1 Cr.

One of the following options:
a. KIN $\mathbf{1 0 0}$ Healthy Lifestyles 1 Cr.
b. KIN 101 Wellness and Stress 1 Cr.
B. Major Field Requirements

A student must complete one disciplinary science major of at least 32 credit hours (astronomy, biology, chemistry, computer science, geography, mathematics, meteorology, physics, psychology) and:

1. A science minor, $\underline{\mathbf{O R}}$
2. A non-science major, $\underline{\mathbf{O R}}$
3. The Fundamentals of Business Minor (page 371), $\underline{\text { OR }}$
4. The Business Administration Minor (page 370), OR
5. A Secondary Education Major (page 119), OR
6. An Applied Statistics Minor (page 371), OR
7. An Engineering Minor (page 321), OR
8. A Geographic Information Systems Minor (page 165).
9. The 32-credit Environmental Science Complementary Major (page 142)

OR two minimum disciplinary science majors (astronomy, biology, chemistry, computer science, engineering, geography, mathematics, meteorology, physics, psychology);
OR the 52-credit Environmental Science Major
OR the 28-credit Exercise Science Major, plus either the Chemistry or Human Biology Minor (see page 198)
OR complete at least 40 credit hours in the first major.

No more than $\mathbf{6 0}$ credit hours from a single subject area may be applied toward the $\mathbf{1 2 4}$ credit hours required for graduation.
The departmental major or the individualized major may be chosen provided that the major is at least 32 credit hours but not more than 48 credit hours; that courses for an individualized major are chosen from the sciences listed in item B above, and that other restrictions on majors are followed.

## Bachelor of Science in Education Degree (124 Cr.)

Completion of a special curriculum with a major in elementary education leads to the degree of Bachelor of Science in Education.

## A. General Education Requirements

For details see Bachelor of Arts degree.

1. First Year Core 10 Cr .
2. Theology 6 Cr.
a. THEO 200 The Christian Tradition 3 Cr .
b. One 300-level Theology course 3 Cr .
3. Writing Intensive Course 3 Cr.
4. Cultural Diversity 3 Cr.
a. ED 470 Diversity, Equity, and Education 3 Cr.
5. Humanities
a. ENGL 200 Literary Studies 3 Cr.
b. One of the following options:
1) HIST 120 The American Experience to 1877 OR 3 Cr .
2) HIST 121 The American Experience in the Modern World 3 Cr.
6. Social Sciences 3 Cr.
a. ED 206 School and Society 3 Cr.
7. Natural Sciences 6-8 Cr.
a. Two courses from the list of Natural Science courses on page 480
8. Quantitative Analysis 4 Cr.
a. MATH 213 Mathematics for Elementary Teachers I 4 Cr .
9. Health and Wellness 1 Cr.

One of the following options:
a. KIN $\mathbf{1 0 0}$ Healthy Lifestyles 1 Cr .
b. KIN 101 Wellness and Stress 1 Cr .
B. Education Requirements

The requirements for the elementary and secondary education majors are listed beginning on page 116.

## Bachelor of Science in Physical Education Degree (124 Cr.)

## A. General Education Requirements

For details see Bachelor of Arts degree.

1. First Year Core 10 Cr.
2. Theology 6 Cr.
c. THEO 200 The Christian Tradition 3 Cr.
d. One 300-level Theology course 3 Cr.
$\begin{array}{ll}\text { 3. Writing Intensive Course } & 3 \mathrm{Cr} \text {. }\end{array}$
3. Cultural Diversity 3-4 Cr.

One of the following options:
a. Foreign Language 203 or higher 4 Cr .
b. Cultural Diversity course 3 Cr .
5. Humanities 3 Cr .

One of the following options:
a. Fine and Performing Arts 3 Cr .
b. History 3 Cr .
c. Literature 3 Cr .
d. Philosophy 3 Cr .
6. Social Sciences 6 Cr.
7. Natural Sciences 6-8 Cr.

Exercise Science majors must complete BIO 151 and CHEM 111.
8. Quantitative Analysis 3 Cr.

PSY 201 or MATH 124 (or higher)
9. Health and Wellness

1 Cr .
One of the following options:
a. KIN 100 Healthy Lifestyles 1 Cr .
b. KIN 101 Wellness and Stress 1 Cr.
B. Major Field Requirements

The first major, if the student has a double major, must be physical education. See page 196 for specific major requirements.

## Bachelor of Social Work Degree (124 Cr.)

## A. General Education Requirements

For details see Bachelor of Arts degree.

1. First Year Core 10 Cr.
2. Theology 6 Cr.
e. THEO 200 The Christian Tradition 3 Cr.
f. One 300-level Theology course 3 Cr .
3. Writing Intensive Course 3 Cr.
4. Cultural Diversity 11 Cr.
a. Foreign Language 8 Cr.
b. Cultural Diversity course 3 Cr .
5. Humanities 6 Cr.

Two courses, one each from two different areas:
a. Fine and Performing Arts 3 Cr .
b. History 3 Cr .
c. Literature 3 Cr .
d. Philosophy 3 Cr.
6. Social Sciences 6 Cr.
7. Natural Sciences 6-8 Cr.
8. Quantitative Analysis 3-4 Cr.
9. Health and Wellness 1 Cr.

One of the following options:
a. KIN $\mathbf{1 0 0}$ Healthy Lifestyles 1 Cr.
b. KIN 101 Wellness and Stress $\quad 1 \mathrm{Cr}$.
B. Major Field Requirements

The first major, if the student has a double major, must be social work. See page 261 for specific major
requirements.

## Special Academic Regulations for the College of Arts and Sciences

## Regulations Concerning General Education Requirements

1. No course may be used to meet more than one General Education Requirement, with the exception of the writing intensive course requirement.
2. Only courses of at least three credits may be used in meeting General Education Requirements, excluding the requirement in Kinesiology.
3. Courses taken to fulfill major requirements (departmental majors or interdisciplinary majors) may be presented in fulfillment of General Education Requirements where applicable.

## Restrictions on the Use of Credit Hours for Degrees in the College of Arts and Sciences

1. A student may apply no more than four credit hours in Kinesiology $\mathbf{1 0 0}$ or Activity Courses toward a degree in the College of Arts and Sciences.
2. At most, four credit hours from the Computer Science courses numbered $\mathbf{1 2 8}$ and $\mathbf{2 9 0}$ may be applied toward a degree.
3. Non-music majors are limited to $\mathbf{1 6}$ total credit hours of applied music (studio instruction and/or ensemble). For further clarification see page 223.
4. No more than $\mathbf{6 0}$ credit hours in any one subject may be applied toward the total of 124 credit hours required for graduation, each subject being identified by the 2-4 letter code preceding each course number in the catalog (e.g., COMM, MUS, KIN, THTR). This limitation does not apply to students pursuing:
a. the Bachelor of Music degree
b. the Bachelor of Music Education degree
c. the Bachelor of Physical Education degree with a major in Teacher Education
5. A student may apply no more than $\mathbf{1 6}$ credit hours of ROTC coursework toward a degree in the College of Arts and Sciences. These credits may be used as free electives only.
6. A student may apply no more than $\mathbf{3 0}$ credit hours collectively from the professional colleges of the University toward a degree in the College of Arts and Sciences. Furthermore, no more that 15 of these credits may be included within an Individualized Major. In that case, any remaining professional college credits, up to the maximum of 30, may only be counted towards electives and general education requirements.

## Professional and Pre-Professional Areas

The College of Arts and Sciences offers degrees especially designed for teaching in elementary schools, teaching of music, performance of music, creation of art works, work in physical education, and social work. The appropriate degrees are described earlier, beginning on page 46. In addition, students can prepare for teaching in secondary schools under a variety of majors for Bachelor of Arts and Bachelor of Science degrees. The Diaconal Education and Formation Process, the pre-legal program, and the pre-medical arts programs are professional preparatory programs a student may complete while pursuing a liberal arts major.

Students interested in any of these programs should declare the program before entering the sophomore year.
Those pursuing an Associate in Science degree may elect the cytotechnology certification option. This program requires the student to complete a one year program in an accredited school of cytotechnology and a one year prescribed course of study at Valparaiso University. The credits from the cytotechnology program (usually 30) will transfer to Valparaiso University to meet about half of the requirements for the A.S. degree. See page 48 for the degree requirements for the Associate in Science degree. Students should contact a pre-medical arts advisor for specific science courses that must be completed.

## Teacher Education Programs

The Teacher Education Program is under the direction of the Department of Education. Eligibility for admission to the program is determined by the department.

The University currently prepares applicants for licensure in the following licensure categories listed under types of school and developmental settings.

## License: Elementary Teaching

Elementary: Grades K-6
Additional content areas in any subject areas listed under Secondary Teaching

## License: Secondary Teaching

Grades 5-12 Content Areas:
English/Language Arts
World Languages-Chinese, French, German, Latin, Spanish
Mathematics
Science-Life Sciences, Physical Sciences, Chemistry, Physics, Earth/Space Sciences
Social Studies
History

## P-12 License

Art Education
Exceptional Needs- Mild Intervention
Health Education
Music Education
Physical Education
World Languages-Chinese, French, German, Latin, Spanish

## Preparation for the Medical Arts

Students can prepare for entrance into medical, dental, veterinary, medical technology, physical therapy, or paramedical schools by entering one of the pre-medical arts programs of the college. Students in these programs must have their schedules approved at the beginning of each semester by a major advisor and an assigned pre-medical arts academic advisor. Advising in the pre-medical arts is handled by pre-medical advisors, who are members of the Committee on Pre-Medical Arts. All recommendations to the professional schools are sent out by this Committee: Professor Nelson (Psychology); Associate Professors Goyne (Chemistry), K. Jantzi (Chemistry), Scaglione-Sewell (Biology), Schoer (chair, Chemistry), Scupham (Biology); Assistant Professor R. Clark (Chemistry).

Pre-medical and pre-dental students are invited to join the Premedical Society, a student organization that promotes interest in medicine and dentistry through a program of guest lectures and social events. Those with outstanding academic records may be invited to join Alpha Epsilon Delta, a national medical honorary society.

In some fields such as medicine, dentistry, and veterinary medicine, completion of a Bachelor of Arts or Bachelor of Science degree is often required before admission to a professional school. However, if three years or less of college work are needed for entrance into a professional program, a student may earn a bachelor's degree through the University's Combined Liberal ArtsMedical Arts program. This involves three years of work at Valparaiso University and one year of work at an approved professional school. Details are in the next section of this catalog. This program is often used by students in medical technology.

Students who want to enter allied health fields that require two years or less of college preparation may want to earn the Associate in Science Degree described on page 48. Further information about allied health fields may be obtained from the office of the Allied Health advisor.

The course, GS 394, Health Care Professional Apprenticeship (see page 66), is offered in the Summer I Session (see page 391) and is of interest to students in pre-medical arts. Details are given in a Summer Session announcement each year.

## Combined Liberal Arts-Medical Arts Program

Students may complete the degree Bachelor of Arts or Bachelor of Science from Valparaiso University by completing three years of study at this University and completing an additional year's work at an approved school of medicine, dentistry, veterinary medicine, medical technology, or other allied health disciplines. Prior approval of the program must be secured from the Committee on Pre-Medical Arts.

Specifically, students who elect one of these programs must meet the following requirements:

1. They must spend the junior year in residence at Valparaiso University.
2. They must meet all General Education Requirements for the Bachelor of Arts or Bachelor of Science degree with the exception that one course in theology is waived.
3. They must complete an academic major. For the Bachelor of Science degree this major must be in one of the science fields.
4. They must complete at least 93 semester credit hours of college work.
5. They must apply for graduation by the deadline date as noted at the front of this catalog and present to the Office of the Registrar an official transcript of an additional year's satisfactory work at an approved professional school.

## Preparation for the Study of Law

Students who plan to attend law school after graduation should select any rigorous course of study for their majors. According to the American Bar Association, "The ABA does not recommend any undergraduate majors or group of courses to prepare for a legal education. Students are admitted to law school from almost every academic discipline. Taking a broad range of difficult courses from demanding instructors is excellent preparation for legal education." Based on these ABA recommendations, Valparaiso University does not require Pre-Law students to follow a specific curriculum. Instead, students are encouraged to select a major that will be both challenging and interesting and that will help them develop strong research and writing skills. Additionally, students may choose from an array of elective courses on legal topics offered by several of the College of Arts and Sciences departments, including Communication, Political Science and International Relations, and Sociology. The College of Business also offers courses in business law.

The presence of Valparaiso University Law School provides still more opportunities for Pre-Law students including access to a law library, frequent speakers of national and international prominence, and interaction with law faculty.

Pre-Law students at Valparaiso University are encouraged to be active in the Pre-Law Program, which provides academic advising, guidance on law school admissions, and several programs, including the Law School Fair, Mock Trial Team, Visit Day at the Valparaiso University Law School, and Law Career Day. Students may also participate in the student-run Pre-Law Society.

The combination of rigorous academic work and Pre-Law programming has prepared many of the University's graduates for placement in some of the finest and most prestigious law schools in the country.

To learn more about the Pre-Law Program, visit the website at www.valpo.edu/prelaw or contact the program coordinator at James.Old@valpo.edu.

## Combined Liberal Arts-Law Program

Students may complete their bachelor's degree from Valparaiso University by completing three years of study at this University and completing an additional three year's work at the Valparaiso University Law School. Thereby students may obtain in six years (twelve semesters) both the bachelor's degree and the Juris Doctor degree. Prior approval of the program must be secured from the Office of the Dean of the College of Arts and Sciences.

Students who elect this program must meet the following requirements before beginning the Law School:

1. They must satisfactorily complete all General Education Requirements for the bachelor's degree and an academic major.
2. They must satisfactorily complete at least 94 undergraduate credit hours.
3. At least one half of the credit hours for the major must be taken at Valparaiso University.
4. At least 75 credit hours, including the last 30 credit hours, must be taken at Valparaiso University.
5. They must have a grade point average of 3.0 in all undergraduate work at Valparaiso University.
6. They must be admitted to the Valparaiso University Law School through the normal admissions process.
7. They must complete a minimum of 30 credits in the Valparaiso University Law School with a grade point average of at least 2.0.
8. They must apply for the Bachelor's degree graduation by the deadline date as noted at the front of this catalog.

## Preparation for Seminary

Graduates of Valparaiso University are accepted into the seminaries not only of The Lutheran Church — Missouri Synod (LCMS) and the Evangelical Lutheran Church in America (ELCA), but also of other Protestant bodies, and into graduate divinity schools throughout the United States. (Students are encouraged to consult the web sites of divinity schools or graduate programs in theology or religion for specific admission requirements.)

## Recommended Preparation for Admission to M.Div. Program at LCMS Seminaries

The LCMS seminaries in St. Louis, Missouri, and Fort Wayne, Indiana, recommend a bachelor's degree that includes a broad liberal arts curriculum and preferably the ability to read languages (especially German, Latin, Greek, and Hebrew). Language skills can be acquired through courses provided at the seminary as well. Students accepted into the M.Div. program must pass the Entry Level Competency Examinations (Old Testament content, New Testament content, Christian doctrine, Biblical Greek, and Biblical Hebrew) before they can enroll in M.Div. courses. Valparaiso University offers courses in all of these areas of study through the departments of Theology and Foreign Languages and Literatures. Finally, both seminaries expect applicants to have taken courses to improve written and spoken English: English composition and writing, and speech (both writing and delivering).

## For Students Preparing for Admission to the Seminaries of the ELCA

The eight seminaries of the ELCA offer a variety of post-baccalaureate degree programs, including the M.Div., which is the basic professional degree for those seeking ordination as pastors, and the M.A., which may be used to prepare for other ministries in and beyond the church (diaconal ministers, Associates in Ministry, and education).

While specific requirements for admission vary, the following captures the typical academic prerequisites:

1. a bachelor's degree from an accredited college or university (some seminaries specify the B.A. degree; others do not) with a cumulative GPA of 2.5-3.0 on a 4.0 scale;
2. a broad background in the liberal arts (English composition and literature, history, philosophy, psychology, the biological/natural and social sciences, and foreign languages);
3. some seminaries require up to two semesters of classical or koine Greek (which may often be met by means of a summer intensive language course).
Beyond these academic requirements, another part of the application for admission to the ELCA seminaries addresses personal qualifications. Those interested in pursuing a rostered ministry in the ELCA should also begin to forge a relationship with their synod candidacy committee as they begin the application process.

Students may be interested in the special articulation agreement with the Lutheran School of Theology at Chicago, whereby they can earn a bachelor's and master's degree in a total of seven years (including internship). See " $4+3$ Option" under the Department of Theology (page 279) for details.

Further information is available from the chair of the Department of Theology and on the department's web site: www.valpo.edu/theology.

## Arts and Sciences Pre-Engineering Program

Applicants for admission to the College of Engineering may require additional work, usually in mathematics or the sciences, before admission is granted. Such students may be admitted to the pre-engineering program in the College of Arts and Sciences for this preparation if they are registered for, or have completed a college-level pre-calculus course. While in the program, preengineering students may take engineering courses if they satisfy the prerequisites and co-requisites. Students in this program are expected to make progress toward admission into the College of Engineering in a timely manner. In order to enter the College of Engineering, pre-engineering students must have a cumulative resident grade point average of 2.00 or higher in each of the three categories listed in the College of Engineering Graduation Requirements section (page 324). Pre-engineering students who have not matriculated into the College of Engineering within three semesters will be removed from the program and will need to select another major within the College of Arts and Sciences, the College of Business, or the College of Nursing. Students should contact the College of Engineering assistant dean for student success for details.

## Diaconal Education and Formation Process

The University and the Lutheran Deaconess Association (LDA) cooperate in the education and formation of men and women for service in diaconal ministry. In response to a changing world, the LDA offers a process that allows students to express their Christian vocation through church, civic, or human service professions. Plans may be individualized, combining diaconal students with many academic majors, to earn a graduate or undergraduate degree.

The education and formation process is under the counsel and guidance of the staff of the Lutheran Deaconess Association. Inquiries should be directed to the director of education and formation, Center for Diaconal Ministry, 1304 LaPorte Avenue, Valparaiso, Indiana 46383-9978. Phone 219-464-6925. Email: deacserv@valpo.edu. Application forms and fee schedule are outlined on the website: www.valpo.edu/lda. Students may apply during their sophomore year, but must be at least 20 years old or have junior standing. Week-long orientation and annual seminars are required during each year of the process.

Diaconal students work with the LDA staff and academic advisors to determine a program of academic study, planned experiences, and reflection in these areas:

1. Spirituality

Focus on personal and spiritual growth, which may include spiritual direction, discernment retreats, counseling, journal reflection, prayer, and worship.
2. Theology

Academic courses cover these topics.
Exceptions can be made with agreement between LDA and the student's academic advisor.
a. Biblical Studies, both Old and New Testament, or overview of the Bible;
b. Church History, from the apostolic era through Reformation to present;
c. Lutheran/Christian Theology;
d. World Religions or in-depth study of a non-Christian tradition;
e. Theology of Diaconal Ministry (THEO 451/551);
f. Basic Homily Preparation, proclamation of the gospel;
g. Practicum in Ministry (THEO 480/680. May be taken twice, to fulfill work/ministry requirement; see below;
h. Clinical Education for Ministry (THEO 453/553). May be taken to fulfill work/ministry requirement; see below.

Other courses may be suggested, depending on the student's ministry focus, such as: understanding of self, others, and group dynamics; Christian worship; religious education; understanding issues of human need; and social justice.
3. Work/Ministry

Field work at a practical ministry site; 100 hours over two semesters. May be taken for credit at Valparaiso University (THEO 480/680, two credits per semester), or may be completed without academic credit.
Clinical Pastoral Education may be taken for credit at Valparaiso University (THEO 453/553, Clinical Education for Ministry), or may be completed through a certified CPE program off-campus.
Internship in a ministry or human services profession, one year, full-time paid position. May be done between the junior and senior year or after graduation.
4. Diaconal Community

Participation in the deaconess community, including campus activities, area deaconess groups, and annual conferences.
Deaconess ministries have been combined with, but are not limited to, these academic majors and programs: Theology; Nursing; Church Music, liturgy, worship; Education; Psychology; Social Work; pre-medical, medical fields, occupational therapy/physical therapy; languages and classical languages; International Service; Law; Youth, Family, and Education Ministry; Business; Master of Arts in Liberal Studies programs.

## Combined Liberal Arts-Engineering Program

Students may earn in five years (ten semesters) both the Bachelor of Arts degree and one of the Bachelor of Science in engineering degrees. They may earn the two degrees by completing one of the engineering curricula and the General Education Requirements of the Bachelor of Arts degree as well as the major requirement of the College of Arts and Sciences. This requires them to earn at least 157 credit hours and to have a standing of at least 2.00 in all of their work. Students who elect such a program must have their schedules approved by both the dean of the College of Arts and Sciences and the dean of the College of Engineering at the beginning of each semester. Sample or representative curricula for such programs may be obtained upon application to the dean of the College of Engineering.

## Departmental Honors Work

Honors Work is designated for students of exceptional ability who may benefit by earning a limited number of the credits required for graduation through supervised independent study rather than through regular course work. Students who apply for Honors Work should understand that their work will be evaluated according to the highest standards of scholarly achievement.

Honors Work may be pursued by any student who is a degree candidate in the College of Arts and Sciences and whose major or program is administered by a department or an administrative committee within the college. Students may not pursue Honors Work as part of an individualized major.

A student who has completed at least 80 credit hours, but has not yet entered upon the work of the last two semesters, and who has a cumulative grade point average of at least 3.00 and a grade point average in the major of at least 3.50 may apply through the major department or program committee for admission to Honors Work. To apply, the student must submit a plan for a major independent project that will be undertaken under the supervision of a member of the major department or program. The application form, which requires the student to articulate the independent project briefly, clearly, and with a timetable and modest bibliography, is available in the Dean's Office. (For more information, please attend the Beyond Valpo program held annually during the spring semester.) This plan must be presented to the chair of the student's department or program for approval and forwarded to the Dean's Office no later than 12:00 p.m. on the first Monday of April of the student's second semester, junior year. The dean will then forward the application to the Scholarship and Advising Committee for final approval. If the proposed independent study project is approved, the student should enroll in a course numbered 497 "Honors Work in (the major department or program)" in the first semester of the senior year.

A student who has been admitted to Honors Work must present four copies of a completed draft of the project to the chair of the major department (or program) at least ten class days before the beginning of the final examination period of the student's first semester of the senior year. With prior approval, the student may substitute for the completed draft a status report demonstrating substantial progress (in certain areas, such as in the experimental sciences). In the case of a status report, the student should describe the work accomplished during the semester and the plans for continued work during the following semester. The project is then judged at midyear by a project committee consisting of the chair of the major department or program, the project advisor, one additional department reader, and one outside reader who is a member of the Scholarship and Advising Committee. If, based on the status report or draft, the project committee affirms the likelihood that the student will be able to conclude an exceptional piece of scholarship appropriate to the student's discipline by the end of the following semester, that student will be admitted to Candidacy for Honors. If the project has not progressed as had been expected (the student must earn an A or A-for the first semester), the student will be denied admission to Candidacy for Honors. The student should consult with the project advisor for departmental/program evaluation policy.

If admitted to Candidacy for Honors, the student should register during the second semester of the senior year for a course numbered 498, "Honors Candidacy in (major department or program)" A student must complete the independent study project begun in the previous semester, incorporating additions or revisions suggested by the project committee to its satisfaction. Four copies of the completed project report must be delivered to the chair of the major department or program at least fifteen class days before the beginning of the final examination period of the student's final semester. The original project committee shall then schedule an oral examination for the Honors Candidate to assess the student's knowledge of matter covered in the independent study project and any other closely related matters deemed appropriate by the project committee. The Honors Candidate shall be notified beforehand of the related matters to be included in the examination. If, in the opinion of the project committee, the candidate is worthy of honors, it shall recommend to the dean that the student be awarded three credit hours with a grade of A or A- for course numbered 498 and be graduated "With Honors in (the major field)." If the candidate is not deemed worthy of honors, the Office of the Dean, upon consultation with the project committee, may recommend that the student be granted three credit hours for Independent Study in the major department or program, with a grade determined by the project committee. Two copies of the final project report will be given to the Dean's Office for archival purposes.

During the semester or semesters of engagement in Honors Work, a student is not allowed to carry more than 12 credit hours in addition to Honors Work.

A student whose major requires completion of a senior project may register for Honors Work in lieu of the departmental senior project course, after securing permission from the department chair. The same procedures as outlined above must be followed.

## Cooperative Education

Cooperative Education in the College of Arts and Sciences is a program in which students combine professional, paid, work experience with academic programs. Students may be employed in full-time (called alternating) or part-time (called parallel) placements. Normally, a semester of full-time employment will earn a maximum of 3 credit hours; a full-time summer employment, a maximum of 2 credit hours; and a part-time (parallel) placement requiring a minimum of fifteen hours per week, 1 credit hour. Parallel placements of fewer than fifteen hours per week may be given 0.5 credit hours. Students will normally complete a minimum
of two alternating or four parallel work assignments. The program is available through various departments as well as through the general offerings of the college. The college's general program is intended both for undeclared majors who are able to use cooperative education on an exploratory basis and for declared majors who may wish to participate outside their major department on an elective basis.

The following policies govern Cooperative Education within the college:

1. The student works under the advisement of a faculty member who monitors the work experience, evaluates the required written reports by students, and assigns the course grade.
2. A student is eligible upon completion of two semesters of enrollment in residence with a minimum cumulative grade point average of 2.50 . Co-op is open to students upon completion of the freshman year.
3. Placements require prior approval of the coordinator of cooperative education-- retroactive credit will not be granted.
4. Course credits count as electives toward graduation or, in certain academic departments where specified, count toward the department's major or minor.
5. No more than a combined total of 12 credit hours earned through cooperative education, internship, field experience, or other work experiences may be applied toward the meeting of minimum graduation requirements. Exceptions may occur in certain departments due to professional certification requirements.
Additional restrictions may apply in departments where the cooperative education credits count toward major or minor requirements.

## General Courses Offered by the College of Arts and Sciences

CORE 105 University Writing 3+2, 4 Cr.
An introductory course designed to help undergraduates read and write essays in order to participate in the academic conversations that form Valparaiso's intellectual community. While engaging with pieces of Western Literature, the course gives special attention to the practices of close reading, rhetorical analysis, collaboration, and substantive revision. By writing multiple drafts of essays typically ranging from three to ten pages, students will learn that writing is a process of forming and refining their ideas and their prose. The course teaches writing as a unique skill that can be practiced and developed.

CORE 110 The Human Experience 5 Cr .
A writing-intensive interdisciplinary course that initiates first year students into the VU academic community by exploring significant themes in human experience, engaging students with resources from the areas of history, theology, philosophy, literature, and the arts. It is a core experience extending for two semesters, 5 credits each semester, in seminar sections of about 20 students. It is taught by a trained core faculty from areas across the University, the faculty meeting regularly to promote extensive collaborative activity for both faculty and students. Prerequisite: Appropriate IELTS/TOEFL/SAT/ACT score or appropriate high school GPA or CORE 105.

CORE 115

## CORE 405

CPED 382

## The Human Experience

5 Cr .
A writing-intensive interdisciplinary course that initiates first year students into the VU academic community by exploring significant themes in human experience, engaging students with resources from the areas of history, theology, philosophy, literature, and the arts. It is a core experience extending for two semesters, 5 credits each semester, in seminar sections of about 20 students. It is taught by a trained core faculty from areas across the University, the faculty meeting regularly to promote extensive collaborative activity for both faculty and students. Prerequisite: CORE 110 or CC 110.

University Writing: Peer Tutoring
$1+2,2 \mathrm{Cr}$.
A course for students serving as peer tutors in CORE 105. Peer tutors will learn to assist other students in learning to read and write college-level essays, while refining their own abilities in the practices of close reading, rhetorical analysis, collaboration, and substantive revision. Instructor approval required. S/U grade only.

This course is a prearranged, approved, professional work experience with a cooperating employer. A written report is required of each student. The prerequisites are one year in residence, a minimum cumulative grade point average of 2.50, and the approval of the coordinator of cooperative education.

Cooperative Education II
$0.5-3 \mathrm{Cr}$.
The prerequisites for additional cooperative education experiences are the same as for CPED 381, plus positive work performance evaluations by the previous cooperative employer(s).

## CPED 383

GS 100

Cooperative Education III
$0.5-3 \mathrm{Cr}$.
The prerequisites for additional cooperative education experiences are the same as for CPED 381, plus positive work performance evaluations by the previous cooperative employer(s). This course may be repeated beyond 383 for additional credit, subject to the guidelines of the college, as stated above.

Strategies for Academic Success
1 Cr.
A seminar designed to offer skill development and student success strategies that will enhance and promote academic achievement. Course topics include effective use of study time and learning strategies (active reading, note taking, organizing, memory techniques), test preparation (study plans), test-taking techniques, time management, overcoming procrastination, goal setting, motivation, decision making, developing a strengthbased mindset, and using academic support resources on campus. The course meets over a 14-week or 7-week period, depending on the section.

Transitioning to Valpo for International Students
1 Cr.
A seminar designed to offer success strategies and skill development (especially in writing and speaking English) for international students new to living and studying in the U.S. Readings, writings, discussions, and activities in the course will provide support for students' successful integration into campus culture while maintaining cultural identity. Course topics include transitioning to the U.S. academic, social, and political culture, thinking independently and creatively, learning about academic honesty, meeting academic challenges, understanding University policies and procedures, using campus resources, getting involved in campus activities, participating in class, and interacting with professors. A 7-week course offered in both fall and spring semesters.

English Conversation Partners
1 Cr .
This full-term course is designed for international students who will engage in cross-cultural conversations in groups of two or three with domestic/native English speaking students enrolled in GS 180. Students will gain experience in language skills, speech behaviors, cultural knowledge, and socialization. Requirements include a minimum number of conversation hours as well as a written reflection. Permission of the instructor is required. S/U grade. May be repeated for up to 2 total credits. International Students only.

Exploratory Studies
2 Cr.
This seven-week course will focus on three areas: an analysis of students' personal strengths, interests, beliefs, and values; a concentrated exploration of academic majors; and an introduction to career exploration and preparedness. Study and discussion of texts and films along with informal and formal writing will help students as they are guided to discern possible academic, career, and vocational pathways. This course will be required of all exploratory students in the first semester of their freshman year; any freshman or sophomore student may elect to take the course.

Civic Engagement
1-2 Cr.
This course recognizes student volunteer service work for the community. Students earn the credit by completing a specific project, which may be initiated as part of a particular course, through a recognized University service organization, or independently. If students undertake the project through a service organization or independently, a professor must certify the project as appropriate, supervise its completion, and assign the grade. Students must file a proposal with the supervising professor and register for the credit. The proposal must present a detailed overview of the work of the project, which must entail a substantial time commitment (a minimum of 45 hours of work is required for each credit), and identify a written reflection component specifically related to the project. Students may not earn additional GS credit for work already required by the service-learning component of a course. Internship students may earn GS credit through an additional project, with the consent of the instructor. $S / U$ grade. This course may be repeated for up to 3 total credits.

## Study Circle on Race Relations

2 Cr .
This course will offer 8-20 students the opportunity to engage in a series of participatory, democratic discussions about race relations on campus and in society. In addition, students will learn how to become involved in improving human relations by developing and implementing an 'action plan' component that involves collaborative, practical strategies that improve race and ethnic relations on campus and in our community. The instructor(s) for the course will serve as facilitator(s), establishing ground rules for a safe, focused discussion in which participants can exchange ideas freely and consider a variety of views about race relations in America. This course is offered for $S / U$ grade only and may be used in partial fulfillment of the Cultural Diversity component of the General Education Requirements.

Facilitator Training for Study Circles
1 Cr .
This course will be offered to students who have completed GS 200 and who want to become facilitators for Study Circles on Race Relations. By taking this course, students will understand what a study circle is, learn about specific study circle programs, understand the role of a facilitator, and practice the basic skills needed to be an effective study circle leader. There will be weekly readings and reflection papers as well as an end of the term report. This course is offered for $S / U$ grade only and may be used in partial fulfillment of the Cultural Diversity component of the General Education Requirements. Prerequisite: GS 200.

## Study Circles on Race Relations: Civic Engagement

1 Cr .
This course will be offered to students who have completed GS 200 and who want to continue to work on community race relations issues initiated in GS 200. Students earn the credit by expanding the scope of the GS 200 action plan. Students must file a proposal with one of the co-directors of the Study Circles program and identify a written reflection component specifically related to the project, in order to register for the course. The proposal must present a detailed overview of the work of the project. A minimum of 20 hours of work is required. This course is offered for $S / U$ grade only and may be used in partial fulfillment of the Cultural Diversity course component of the General Education Requirements. Prerequisite: GS 200.

Contemporary Issues in Philanthropy and Service
3 Cr.
This course examines current trends and challenges in the fields of philanthropy, service, and non-profit leadership. Topics may include the rise in social enterprises, venture philanthropy, micro-lending, and the influence of technology on giving patterns. The course will also emphasize the shifting roles and relationships of the private, public, and non-profit sectors in meeting social needs and leading social change. Prerequisite: Core 115, CC 115, or permission of the instructor.

Internship
$1-6 \mathrm{Cr}$.
Students may arrange, in consultation with a dean in the College of Arts and Sciences, for an experientiallearning work opportunity in a supervised internship. Midterm progress report and final report required. Proposals for General Studies internships must be approved by the dean of the college. Limited to internship credit that does not meet the requirements for internship credit in a disciplinary curriculum. S/U Grade only.
General Topics 1-3 Cr .
A course on a specialized topic that may not fit conveniently within a particular department, or that may be interdisciplinary in nature.
Topics in English Life and Culture
3 Cr .
A study of selected aspects of English life and culture. Topics might include, but are not restricted to politics, education, religion, business, environment, and multicultural issues. Cambridge Center only.
Topics in German Life and Culture
3 Cr .
A study of selected aspects of German life and culture. Topics might include, but are not restricted to politics, education, religion, business, environment, and multicultural issues. Reutlingen Center only.

Health Care Professional Apprenticeship
1 Cr .
The course is designed to provide an opportunity for students to observe health care professionals at work in a hospital or clinic setting. The student is required to spend at least 120 hours shadowing one or more health care professionals. Students must submit a daily journal and paper detailing their experiences to their academic advisor. S/U grade. Prerequisites: Proof of instruction in safeguarding the privacy of Protected Health Information (PHI) as specified in the Health Insurance Portability and Accountability Act (HIPAA); one year in residence; a minimum cumulative grade point average of 3.2; and approval of the academic advisor.

## Independent Study Project

1-4 Cr.
An independent project is conducted on a topic selected by a group or individual. Graded S/U. Prerequisites: Approval of a faculty sponsor and the dean of the College of Arts and Sciences. This course is administered by the dean of the College for students who desire to work on a specialized academic project. A proposal for an independent study project must be submitted at least three weeks before the beginning of the registration period for the semester in which the project is to occur. Further details and an application form may be obtained at the Office of the Dean of the College of Arts and Sciences.

## Natural Science Courses

Introduction to Forensic Science
2+3, 3 Cr.
Forensic science is the application of scientific principles to criminal and civil laws within a criminal justice system with the goal toward establishment of guilt or innocence. This course is designed to introduce some of the specialized fields of forensic science, to learn the fundamental principles of science and technology upon which they are based, and to apply them to a number of suspicious situations and criminal cases. This course is intended for non-science majors for partial fulfillment of the General Education Requirements in Natural Science. Not open to students who have received credit for CHEM 111, 115, 121, or 131 or BIO 151, 152, 171, or 172 without the consent of the instructor. Prerequisite: Grade of C- or higher in MATH 110 or placement higher than MATH 110 on the math placement process.

Science of the Indiana Dunes
2+3, 3 Cr .
This course poses questions about how earth systems work together to produce the physical landscape of the dunes and also asks scientific questions about the human transformation of that landscape. The course is problem oriented and explores questions about the interaction among ecology/biogeography, atmosphere, water, and geology. It also examines the local environment in both regional and global contexts, considering questions about how change shapes the environment, both in the past and into the future. Throughout, students learn scientific concepts and methods and gain basic scientific literacy in order to understand the landscape. This course is intended for non-science majors for partial fulfillment of the General Education Requirements in Natural Science and includes a laboratory component. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

Practical Stream Stewardship: How to Save the Planet One Trout at a Time
2+3, 3 Cr .
An interdisciplinary course with laboratory designed to train students to apply the scientific method to restore a river. Through site visits and field observations, students will survey a river to discover limiting factors then plan and execute improvements. Discussions will include finding community partners, permitting and financing restorations, and learning a philosophy which guides us to attainable ends. Fieldwork is suited for someone with an active lifestyle who enjoys the outdoors. This will be a hybrid course taught in Summer II. Lectures will be online; laboratories (fieldwork) will be on Saturdays from 9 a.m. to 4 p.m.

Principles of Evolution
2+2, 3 Cr.
An introduction to evolutionary principles. Topics may include mutation, selection, genetics, abiogenesis, and speciation. Responses to evolutionary theory, including social Darwinism, eugenics, and creationism, will also be discussed. This course is intended for non-science majors for partial fulfillment of the General Education requirements in Natural Science and includes a laboratory component.

Discovering Insects: Pests or Pals?
2+3, 3 Cr .
This course introduces students to the biodiversity within the bizarre and alien world of insects. It uses insects as a platform to discuss important biological principles. Topics include insects as a life form, the interaction of insects and humans, and insects of medical/forensic importance. The lab focuses on basic insect identification and insect behavior experiments. This course is intended for non-science majors for partial fulfillment of the General Education Requirements in Natural Science and includes a laboratory component. Prerequisite: Math 110 or placement higher than MATH 110 on the math placement assessment.

Topics in Natural Science 1-3 Cr .
A study of selected interdisciplinary topics in the natural sciences. Prerequisite: consent of the instructor.

The Scientific Endeavor
(Also offered as CHEM 490 and PHYS 490.) A study of foundational principles and assumptions of the scientific endeavor, its various methodologies, and its scope and limitations. This will include illustrations from historical case studies and "scientific revolutions." Students will also study the ethical and moral connections between their personal and professional lives. Prerequisite: junior or senior standing. This course may not be used to fulfill the requirements of a science major. This course may be used to fulfill the Humanities: Philosophy requirement of the General Education Requirements when cross-listed with CC 300.

## Urban Semester

The following courses are offered in a residential program in Chicago in cooperation with the Associated Colleges of the Midwest:

| GS 338 | Core Course: Chicago: A City of Many Dimensions | 4 Cr. |
| :--- | :--- | :--- |
| GS 348 | The Seminar | 4 Cr. |
| GS 386 | The Internship | 4 Cr. |
| GS 395 | Independent study Project | 4 Cr. |

All sophomores, juniors, and seniors at the University are eligible to participate in this program. Students shall be admitted to this program on the recommendation of the Urban Studies Advisory Committee.

Valparaiso University students register at Valparaiso for the Chicago Urban Semester and pay to Valparaiso University the general fee charged of all full-time students. Expenses for travel, meals, and lodging are paid directly by the students. Full credit toward graduation is given for all courses taken in the Urban Studies program. The program is offered in both the fall and the spring semesters.

See page 382 for course descriptions and the Urban Studies Minor requirements.


## Actuarial Science

Learn more about Actuarial Science at Valpo online.

## Associate Professor Patrick Sullivan (director).

## Administration

This program is administered by the Department of Mathematics and Statistics in consultation with the Economics Department and the College of Business.

Students who complete the Actuarial Science major will have fulfilled the major field requirements for the Bachelor of Science degree.

## Objectives

Actuarial science can be described as the study of the current financial implications of future contingent events. Actuaries, employed by insurance companies, consulting firms or government agencies, must have excellent quantitative reasoning skills in addition to an understanding of modern business and finance. The Actuarial Science program provides a background in the areas of mathematics, finance, statistics, and economics. Students interested in pursuing the Actuarial Science major or minor should confer with the program director.

## Bachelor of Science - Actuarial Science Major (Minimum 61 Cr.)

A minimum of 61 credit hours approved by the program chair is required. Specific required courses are listed below. Introductory courses fulfill the Quantitative Analysis General Education Requirement and 3 of the 6 credits required for the Social Science General Education Requirement.

| Introductory Courses |  | 24 or 26 Cr . |
| :---: | :---: | :---: |
| ACC 205 | Financial Accounting | 3 Cr . |
| ACC 206 | Managerial Accounting | 3 Cr . |
| ECON 221 | Principles of Microeconomics | 3 Cr . |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| IDS 115 | Business Applications for Decision-Making | 3 Cr . |
| MATH 131 | Calculus I | 4 Cr . |
| MATH 132 | Calculus II | 4 Cr . |
| One course from the following options: |  |  |
| MATH 264 | Linear Algebra | 3 Cr. |
| MATH 260 | Linear Systems and Matrices | 1 Cr . |
| Probability and Statistics |  | 19 Cr . |
| One course from the following options: |  |  |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| One course from the following options: |  |  |
| STAT 340 | Statistics for Decision Making | 3 Cr . |
| ECON 325 | Econometrics | 3 Cr . |
| STAT 343 | Time Series Analysis | 3 Cr . |
| STAT 344 | Applied Probability and Statistical Decision Theory | 3 Cr . |
| STAT 441 | Probability | 4 Cr . |
| STAT 442 | Mathematical Statistics | 3 Cr . |

Actuarial Science

| Finance and Modeling | $\mathbf{1 5 ~ C r}$. |
| :---: | :--- |
| FIN 304 | Financial Management |
| FIN 410 | Theory of Corporate Finance |
| FIN 420 | Investment Management |
| FIN 425 | Financial Derivatives and Risk Management |
| One course from the following options: | 3 Cr. |
| ECON 321 | Intermediate Microeconomic Theory |
| ECON 324 | Managerial Economics |
| Capstre Course |  |
| ACRS 325 | Actuarial Modeling |

## Actuarial Science Minor (Minimum 15 Cr.)

On a smaller scale than the major, the minor in Actuarial Science provides a foundation for students desiring to explore a career as an actuary. Three of the five required courses have considerable prerequisites, and a student interested in this minor should consult with his or her academic advisor as soon as possible to plan a course of study. It is expected that most students will fulfill many of the prerequisites through the course of their academic majors.

| ACRS 325 | Actuarial Modeling | 3 Cr. |
| :--- | :--- | :--- |
| ECON 221 | Principles of Microeconomics | 3 Cr. |
| ECON 222 | Principles of Macroeconomics | 3 Cr. |
| FIN 410 | Theory of Corporate Finance | 3 Cr. |
| STAT 441 | Probability | 3 Cr. |

## Actuarial Science Courses

## ACRS 325/525 Actuarial Modeling <br> 3 Cr .

A study of actuarial models in the context of insurance. Topics include mathematics of finance (including interest theory and annuities), mortality tables, basic life contingencies, and actuarial professional issues. Normally offered in alternate years. Prerequisite: STAT 441 (may be taken concurrently).

ACRS 386

ACRS 400

ACRS 402

ACRS 495

Internship in Actuarial Science
1-3 Cr.
Opportunities for students to have direct, supervised experience in public agencies or private industry, such as insurance companies or consulting firms. S/U grade. Prerequisites: Actuarial Science major and approval of the chair of the Actuarial Science program.
Actuarial Exam P/ Exam 1 Review
1 Cr .
A review of the material covered by the SOA exam $P$ and CAS exam 1. $S / U$ grade. Prerequisite or corequisite: STAT 441.

Actuarial Exam FM/ Exam 2 Review
1 Cr .
A review of the material covered by the SOA exam FM and CAS exam 2. S/U grade. Prerequisite or corequisite: ACRS 325.

Students study advanced topics in actuarial science under the supervision of a faculty member. Written work is required. Prerequisite: consent of the chair of the Actuarial Science program.

## American Studies

## Administrative Committee: Professors Baas (Political Science and International Relations), Buggeln (Christ College, chair), Longan (Geography and Meteorology), Ruff (English).

Students completing the program in American Studies will have fulfilled major field requirements for the Bachelor of Arts degree under the Interdisciplinary Program option.

## Objectives

The program in American Studies offers the undergraduate student an opportunity to study the history and culture of the past and present United States - its ideas, institutions, and symbolic expressions as these have developed over time. Students will approach this complex subject from a variety of avenues and will employ a wide array of methods and materials that reach across traditional disciplines. Students will craft individual majors that draw on course offerings in literature, politics, history, the arts, sociology, geography, and religion. Through this richly diverse course of study, students will learn how the social sciences, the fine arts, and the humanities can work together to illuminate important aspects of American culture. Undergraduates majoring or minoring in American Studies attain a broad vision of the history and cultures of the United States, while deepening their understanding of both its unique and universal qualities.

## Resources

Valparaiso University has special resources for the student in American Studies. Among these are the Library of American Civilization, containing more than 15,000 volumes of American materials on microfiche; American Women's Diaries ( 90 microfilm reels); Black Abolitionist Papers ( 17 microfilm reels); Early American Imprint Collection ( 49,000 items; The War of the Rebellion: official records of the Union and Confederate Armies (130 volumes); Bulletin of the Bureau of American Ethnology (199 volumes); The Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit missionaries in New France, 1610-1791 (73 volumes); the Brauer Museum of Art www.valpo.edu/artmuseum; the Lutheran College Washington Consortium; The Chicago Arts Program; The Chicago Urban Semester (see page 13).

## Bachelor of Arts - American Studies Major (Minimum 48 Cr.)

The student and the chair of the committee, who is advisor for all students in the program, may select courses that fulfill individual academic or career objectives. Courses not included in the list of approved electives may be substituted in some instances if they are approved by the chair of the committee. Students are encouraged to undertake independent study projects.

Honors Work may be undertaken in American Studies with appropriate approval. Students should register for AMST 497: Honors Work in American Studies, and 498: Honors Candidacy in American Studies (see page 73).

| Program Core |  | 24 Cr . |
| :---: | :---: | :---: |
| ENGL 311 | American Literature I | 3 Cr . |
| ENGL 312 | American Literature II | 3 Cr . |
| HIST 120 | The American Experience to 1877 | 3 Cr . |
| HIST 121 | The American Experience in the Modern World | 3 Cr . |
| POLS 120 | The Government of the U.S. | 3 Cr . |
| THEO 324 | Christianity in America | 3 Cr . |
| AMST 495 | Independent Study | 3 Cr . |
| One course from the following options: |  |  |
| ART 320 | American Painting | 3 Cr . |
| ART 321 | American Art \& Architecture | 3 Cr . |
| Elective Courses |  | 24 Cr . |
| Twenty-four credits from the following options: |  |  |
| ART 311 | Topics in the Theory and History of Art | 3 Cr . |
| CC 300 | Seminar | 3 Cr . |
| CC 325 | Seminar (with approval of committee chair and consent of the dean of Christ College) | 3 Cr . |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |


|  | ENGL 365 | Studies in American Literature | 3 Cr . |
| :---: | :---: | :---: | :---: |
|  | ENGL 490 | Topics in Literature (with the approval of the committee chair) | 3 Cr . |
| Note: | The Department of English offers courses under both 365 and 390 that are applicable to the American Studies Program. Recent offerings include The Novel of Social Criticism in American, American Literary Realism, and Fiction by American Women. |  |  |
|  | GEO 274 | North American Indian on Film | 3 Cr . |
|  | GEO 301 | Regional Geography: United States and Canada | 3 Cr . |
|  | GEO 474 | Historical Geography of the U.S. | 3 Cr . |
|  | HIST 225 | Alternative Perspectives of United States History | 3 Cr . |
|  | HIST 321 | The American Revolution, 1763-1789 | 3 Cr . |
|  | HIST 323 | Civil War and Reconstruction | 3 Cr . |
|  | HIST 324 | Depression and War: The United States, 1929-1945 | 3 Cr . |
|  | HIST 325 | The Age of Anxiety: United States Since 1945 | 3 Cr . |
|  | HIST 390 | Topics in History | 3 Cr . |
|  | HIST 394 | Beats and Hippies | 3 Cr . |
|  | HIST 492 | Reading and Discussion Seminar | 2-3 Cr. |
|  | HIST 493 | Research Seminar (with the approval of the committee chair) | 3 Cr . |
| Note: | The Department of History frequently offers seminars under 390, 492 (see above), and 493 that are applicable to the American Studies Program. Recent offerings include Slavery in the Americas, History of the American South, American Environmentalism, Pearl Harbor, and American Immigration History. |  |  |
|  | PHIL 290 | Philosophical Topics (with the approval of the committee chair) | 3 Cr . |
|  | POLS 261 | State and Local Politics in the U.S. | 3 Cr . |
|  | POLS 320 | Politics of Urban and Metropolitan Areas | 3 Cr . |
|  | POLS 390 | Advanced Topics in Political Science I | 3 Cr . |
|  | POLS 326 | The Presidency | 3 Cr . |
|  | POLS 327 | Congress | 3 Cr . |
|  | POLS 371 | Constitutional Law I | 3 Cr . |
|  | POLS 372 | Constitutional Law II | 3 Cr . |
|  | POLS 342 | Political Ideologies (with the approval of the committee chair) | 3 Cr . |
|  | SOCW 260 | Vulnerable Populations: Color, Gender, and Orientation | 3 Cr . |
|  | SOC 325 | Urban Sociology | 3 Cr . |
|  | SOC 347 | Race and Ethnic Relations | 3 Cr . |
|  | SOC 390 | Issues in Sociology (with the approval of the committee chair) | 3 Cr . |
|  | THTR 337 | American Theatre | 3 Cr . |
|  | THEO 320 | Topics in Christian History: History of Lutherans in America | 3 Cr . |
|  | THEO 368 | Native American Religions | 3 Cr . |

## Area Minor in American Studies (Minimum 24 Cr.)

A student fulfilling major field requirements under a major option may present an area minor in American Studies for the required minor. Interested persons should schedule a visit with the committee chair.

| Program Core |  | 12 Cr. |
| :---: | :---: | :---: |
| Twelve credits from the following options: |  |  |
| ENGL 311 | American Literature I | 3 Cr . |
| ENGL 312 | American Literature II | 3 Cr . |
| HIST 120 | The American Experience to 1877 | 3 Cr . |
| HIST 121 | The American Experience in the Modern World | 3 Cr . |
| POLS 120 | The Government of the U.S. | 3 Cr . |
| THEO 324 | Christianity in America | 3 Cr . |
| AMST 495 | Independent Study | 3 Cr . |
| One course from the following options: |  |  |
| ART 320 | American Painting | 3 Cr . |
| ART 321 | American Art \& Architecture | 3 Cr . |


| Elective Courses |  | 12 Cr. |
| :---: | :---: | :---: |
| Twelve credits from the following options: |  |  |
| ART 311 | Topics in the Theory and History of Art | 3 Cr . |
| CC 300 | Seminar | 3 Cr . |
| CC 325 | Seminar (with approval of committee chair and consent of the dean of Christ College) | 3 Cr . |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| ENGL 365 | Studies in American Literature | 3 Cr . |
| ENGL 490 | Topics in Literature (with the approval of the committee chair) | 3 Cr . |
| The Dep <br> Note: Studies <br> Literary | ent of English offers courses under both 365 and 390 that are applicable to the am. Recent offerings include The Novel of Social Criticism in American, m, and Fiction by American Women. | merican merican |
| GEO 274 | North American Indian on Film | 3 Cr . |
| GEO 301 | Regional Geography: United States and Canada | 3 Cr . |
| GEO 474 | Historical Geography of the U.S. | 3 Cr . |
| HIST 225 | Alternative Perspectives of United States History | 3 Cr . |
| HIST 321 | The American Revolution, 1763-1789 | 3 Cr . |
| HIST 323 | Civil War and Reconstruction | 3 Cr . |
| HIST 324 | Depression and War: The United States, 1929-1945 | 3 Cr . |
| HIST 325 | The Age of Anxiety: United States Since 1945 | 3 Cr . |
| HIST 390 | Topics in History | 3 Cr . |
| HIST 394 | Beats and Hippies | 3 Cr . |
| HIST 492 | Reading and Discussion Seminar | 2-3 Cr. |
| HIST 493 | Research Seminar (with the approval of the committee chair) | 3 Cr . |
| The Department of History frequently offers seminars under 390, 492 (see above) and 493 that are applicable to the American Studies Program. Recent offerings include Slavery in the Americas, History of the American South, American Environmentalism, Pearl Harbor, and American Immigration History. |  |  |
| PHIL 290 | Philosophical Topics (with the approval of the committee chair) | 3 Cr . |
| POLS 261 | State and Local Politics in the U.S. | 3 Cr . |
| POLS 320 | Politics of Urban and Metropolitan Areas | 3 Cr . |
| POLS 390 | Advanced Topics in Political Science I | 3 Cr . |
| POLS 326 | The Presidency | 3 Cr . |
| POLS 327 | Congress | 3 Cr . |
| POLS 371 | Constitutional Law I | 3 Cr . |
| POLS 372 | Constitutional Law II | 3 Cr . |
| POLS 342 | Political Ideologies (with the approval of the committee chair) | 3 Cr . |
| SOCW 260 | Vulnerable Populations: Color, Gender, and Orientation | 3 Cr . |
| SOC 325 | Urban Sociology | 3 Cr . |
| SOC 347 | Race and Ethnic Relations | 3 Cr . |
| SOC 390 | Issues in Sociology (with the approval of the committee chair) | 3 Cr . |
| THTR 337 | American Theatre | 3 Cr . |
| THEO 320 | Topics in Christian History: History of Lutherans in America | 3 Cr . |
| THEO 368 | Native American Religions | 3 Cr . |

## American Studies Courses

An independently supervised course of study taken under the direction of a member of the Administrative Committee on American Studies usually during the student's senior year. Students are expected to produce a major paper that reflects intensive reading and research in an area pertaining to American culture and to employ the interdisciplinary methods characteristics of American Studies as a field. Before registering for this course students must submit a prospectus to the administrative committee for approval. Required for majors.

AMST 497 Honors Work in American Studies 3 Cr.
See Honors Work, page 63.
AMST 498 Honors Candidacy in American Studies 3 Cr .
See Honors Work, page 63.

## Art

Learn more about the Department of Art at Valpo online.


## Associate Professors Corazzo, S. Jantzi, Sirko, Tomasek (chair), Wuerffel.

The Art Department offers instruction in motion graphics, graphic design, digital video art, web design and digital media, painting, drawing, photography, sculpture, ceramics, art education, and art history. Gallery and cultural resources on campus and in nearby Chicago are an integral part of the curriculum. Frequent use is made of the outstanding collection of American art in Valparaiso University's Brauer Museum of Art, which offers an active exhibition program.

A major in art may lead to careers in the fine arts and related fine arts services such as museum technology and gallery sales; in areas of visual communication, such as graphic design, photography, and new media arts; and in the field of art education. A graduating art major is also prepared for graduate study in the fine arts.

## Bachelor of Arts - Art Major (Minimum 30 Cr.)

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| ART 101 | Ancient to Medieval Art History | 3 Cr . |
| ART 102 | Renaissance to Modern Art History | 3 Cr . |
| ART 121 | Drawing | 0+6, 3 Cr . |
| One course from the following options: |  |  |
| ART 130 | Introduction to 2D and 3D Design | 0+6, 3 Cr . |
| ART 132 | Introduction to Design and Digital Media | 0+6, 3 Cr . |
| One course from the following options: |  |  |
| ART 162 | Photography I | 0+6, 3 Cr . |
| ART 163 | Introduction to Digital Photography | 0+6, 3 Cr . |
| ART 210 | Museum Studies | 3 Cr . |
| ART 221 | Painting | 0+6, 3 Cr . |
| ART 230 | Graphic Design I | 1+4, 3 Cr . |
| One course from the following options: |  |  |
| ART 151 | Ceramics | 0+6, 3 Cr . |
| ART 251 | Sculpture | 0+6, 3 Cr . |
| ART 399 | Art Colloquium (taken every semester) | 0 Cr . |

Bachelor of Arts - Studio Arts Major (Minimum 45 Cr.)

| ART 101 | Ancient to Medieval Art History | 3 Cr . |
| :---: | :---: | :---: |
| ART 102 | Renaissance to Modern Art History | 3 Cr . |
| ART 121 | Drawing | 0+6, 3 Cr . |
| ART 130 | Introduction to 2D and 3D Design | 0+6, 3 Cr . |
| ART 132 | Introduction to Design and Digital Media | 0+6, 3 Cr . |
| ART 151 | Ceramics | 0+6, 3 Cr . |
| ART 215 | Printmaking | 0+6, 3 Cr . |
| ART 221 | Painting | 0+6, 3 Cr . |
| ART 222 | Painting II | 0+6, 3 Cr . |
| ART 227 | Figure Drawing | 0+6, 3 Cr. |
| ART 251 | Sculpture | 0+6, 3 Cr . |
| ART 335 | Studio Art Thesis Planning | 3 Cr . |
| ART 399 | Art Colloquium (taken every semester) | 0 Cr . |
| ART 435 | Senior Thesis in Studio Arts | 3 Cr . |
| Six additional credits in ART |  | 6 Cr . |


| ART 101 | Ancient to Medieval Art History | 3 Cr . |
| :---: | :---: | :---: |
| ART 102 | Renaissance to Modern Art History | 3 Cr . |
| ART 121 | Drawing | 0+6, 3 Cr . |
| ART 130 | Introduction to 2D and 3D Design | 0+6, 3 Cr . |
| ART 132 | Introduction to Design and Digital Media | 0+6, 3 Cr. |
| ART 163 | Introduction to Digital Photography | 0+6, 3 Cr . |
| ART 230 | Graphic Design I | $1+4,3 \mathrm{Cr}$. |
| ART 324 | Digital Video Art | 1+4, 3 Cr. |
| ART 330 | Graphic Design II | 0+6, 3 Cr . |
| ART 331 | Web Design | 2+2, 3 Cr . |
| ART 336 | Digital Media Arts Thesis Planning | 3 Cr . |
| ART 387 | Motion Graphics | 0+6, 3 Cr . |
| ART 399 | Art Colloquium (taken every semester) | 0 Cr . |
| ART 436 | Senior Thesis in Digital Arts | 3 Cr . |
| ART 463 | Advanced Digital Photography | 1+4, 3 Cr . |
| Three additional credits in ART |  | 3 Cr . |



Art History Minor (Minimum 15 Cr.)

| ART 101 | Ancient to Medieval Art History | 3 Cr . |
| :--- | :--- | :--- |
| ART 102 | Renaissance to Modern Art History | 3 Cr. |
| $\mathbf{3}$ other Art History courses |  |  |

## Degrees

Completion of the degree requirements of the College of Arts and Sciences with a major in art leads to the Bachelor of Arts degree, intended to provide a general art background.

Specialization in art education is possible in the B.A. program; consult the Education Department concerning state and University requirements.

## Approval of Schedules

Students who take a major or a minor in art must have their schedules approved by their advisor prior to the beginning of each semester. Students who expect to teach art should consult, as early as possible, the appropriate advisor in the Education Department concerning state and University requirements.

## Art History Courses


#### Abstract

ART 101 Ancient to Medieval Art History 3 Cr . A survey of art history from prehistoric times through the Gothic period. Field trip. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. ART 102 Renaissance to Modern Art History ..... 3 Cr .

A survey of art history from the Renaissance to the 19th century. Field trip. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. ART 311/511 Topics in the Theory and History of Art $\quad 1-4 \mathrm{Cr}$. An investigation of major periods or developments in the visual arts. Included may be historical topics such as issues in contemporary art, symbolism, and global art history. Field trip. May be repeated for credit provided topics are different. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

ART 318/518 Nineteenth Century European Art 3 Cr . A seminar course tracing major themes in 19th century European art. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: junior standing or approval of the chair of the department.

ART 321/521 American Art and Architecture 3 Cr . A survey of American painting, sculpture, and the building arts, beginning with the earliest settlements in Virginia and New England. Several areas of focus will be integrated with field trips to museums and an architectural tour of landmark buildings. Emphasis will be placed on colonial and modern architecture, nineteenth century realism and romanticism, and the emergence of modernism and abstraction in the twentieth century. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.


## Museum Studies Courses


#### Abstract

ART 210 Museum Studies Introduces students to the practices of museums and collection maintenance, based within the nationallyrecognized Brauer Museum of Art. Students learn about the duties of the director, curator, registrar, and preparator. Study includes discussion of texts and general museum operations, exposure to careers in art museums, and meetings with professionals in the field. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.


## Digital \& Studio Art Courses

| ART 121 | Drawing 0+6, 3 Cr . |
| :---: | :---: |
|  | A basic course in the fundamentals of drawing and using various media. Field trip. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. |
| ART 130 | Introduction to 2D and 3D Design 0+6, 3 Cr . |
|  | An introduction to the visual language and materials used in the studio arts. Students explore both two-dimensional and three-dimensional elements and principles of organization within a work of art. Materials used may include ink, paint, collage, photomontage, wire, plaster, wood, etc. Field trip. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. |
| ART 132 | Introduction to Design and Digital Media 0+6, 3 Cr . |
|  | An introduction to the basic elements and principles of Digital Media Arts. Student learn basic familiarity in Adobe |
|  | Photoshop, Adobe Illustrator, and time-based media. Field trip. May be used to fulfill the Humanities: Fine and |
|  | Performing Arts component of the General Education Requirements. |
| ART 151 | Ceramics 0+6, 3 Cr . |
|  | Basic ceramic processes including wheel throwing, hand building, and coiling. Field trip. May be used to fulfill the |
|  | Humanities: Fine and Performing Arts component of the General Education Requirements. |
| ART 152 | Ceramics: Advanced Studies 0+6, 3 Cr. |
|  | Advanced problems in clay construction and glaze formation with opportunities for specialization. Field trip. |
|  | Prerequisite: ART 151. |
| ART 162 | Photography 1 l $0+6,3 \mathrm{Cr}$. |
|  | Introduction to the techniques, history, and aesthetics of color photography. Each student must have a working |
|  | 35 mm camera. Field trip. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. |
| ART 163 | Introduction to Digital Photography 0+6, 3 Cr . |
|  | Introduction to digital photography, addressing how images are made, seen, and valued. Each student must have a working digital camera. Field trip. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. |
| ART 215 | Printmaking 0+6, |

Students will gain a basic familiarity with the various methods of creating original prints. Whereas other forms of pictorial art focus on the creation of a unique product, printmaking is primarily about creating a matrix from which multiples can be generated. Types of printmaking covered in the class will include serigraphy or screenprinting, intaglio (specifically drypoints made using plexiglass plates), monotype, and relief. Students will learn concepts such as proofing and editioning, and will use an intaglio press for particular projects. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

## Painting

0+6, 3 Cr.
Problems in painting in oil and other media. Emphasis on color theory and composition. Field trip. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Painting II 0+6, 3 Cr.
Continuation of Art 221 with increased concentration on students' individual interests. Field trip. Prerequisite: ART 221.
(Also offered as COMM 230.) Introduction to the principles of graphic design with emphasis placed on typographic solutions. Works are created on Macintosh computers. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Sculpture
$0+6,3 \mathrm{Cr}$.
Problems in forming sculptural statements in various materials and techniques such as concrete casting, metal welding, wood construction, etc. Field trip. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisites: ART 121 and 130 or consent of the instructor

Sculpture: Advanced Studies
0+6, 3 Cr .
Advanced problems in sculpture processes. Field trip. Prerequisite: ART 251.

## Advanced Black and White Photography

0+6, 3 Cr.
Advanced studies in techniques, history, and aesthetics of black and white photography. Medium and large formats are available. Each student must have a working 35 mm camera. Field trip. Prerequisite: ART 162.
ART 290 Topics in Studio Art 0+6, 3 Cr .

Specific topics based on interests of students and faculty. Topics may vary from one semester to another. May be repeated for credit if topics are different. Prerequisite: sophomore standing.

## ART 251

Applied Topics in Art
$0+6,3 \mathrm{Cr}$.
(Also offered as COMM 491.) In this course students will apply concepts to the production of student projects in one or more media. May be repeated when topics vary. Prerequisite: ART 132 or consent of instructor.

Special Topics in Aesthetic Practice
2+2, 3 Cr .
(Also offered as COMM 492.) This course provides instruction in a special topic, combining theory and practice in a combination of lecture and lab classes. Instructor approval required.

## Special Studies Courses

| ART 335 | Studio Art Thesis Planning <br> This course is dedicated to the research, planning, documentation, and presentation of the student's proposal in preparation for the spring semester thesis project, and is required prior to acceptance into the Senior Thesis program. Prerequisite: senior status and consent of the chair of the department. |
| :---: | :---: |
| ART 336 | Digital Media Arts Thesis Planning <br> This course is dedicated to the research, planning, documentation, and presentation of the student's proposal in preparation for the spring semester thesis project, and is required prior to acceptance into the Senior Thesis program. Prerequisite: senior status and consent of the chair of the department. |
| ART 386 | Internship <br> Internships in which students work with professional art-related organizations in such areas as photography, graphic design, or with an art museum. Prerequisite: consent of department chair. S/U grade only. |
| ART 390/590 | Special Studies <br> Specialized work in the practice of art, the teaching of art, and the history of art, arranged by a professor and one or more advanced students. Work in crafts, liturgical design, etc. may be included. An S/U grade option may be stipulated at the beginning of the course. May be repeated for credit. Field trip. Prerequisites: upper class major and consent of the instructor. A formal written proposal is required before registration. The proposal becomes a permanent part of the student's file. |
| ART 399 | Art Colloquium <br> A required course for art major students, which provides weekly opportunities to examine a variety of art-related topics and events. All art major students are required to register for ART 399 each semester they are on campus. S/U grade. |
| ART 435 | Senior Thesis in Studio Arts <br> This course is an intense project-driven learning experience supervised by faculty. Students will spend an entire semester working on projects designed, presented, and approved the previous semester. Final works created during this time will be exhibited at the end of the semester. Prerequisite: ART 335, senior status, and consent of the chair of the department. |
| ART 436 | Senior Thesis in Digital Arts <br> This course is an intense project-driven learning experience supervised by faculty. Students will spend an entire semester working on projects designed, presented, and approved the previous semester. Final works created during this time will be exhibited at the end of the semester. Prerequisite: ART 336, senior status, and consent of the chair of the department. |
| ART 495 | Independent Study in Art <br> Independent work for junior or senior level students under the supervision of an instructor. Prerequisite: consent of the instructor. |
| ART 497 | Honors Work in Art <br> See Honors Work, page 63. |
| ART 498 | Honors Candidacy in Art <br> See Honors Work, page 63. |

## Biology

Learn more about the Department of Biology at Valpo online.


Professors G. Davis, Eberhardt, Swanson, Watters; Associate Professors Dick, Scaglione-Sewell, Scupham (chair); Assistant Professors Bouyer, Bugajski, K. Iceman, Orozco-Nunnelly; Lecturer S. AmRhein.

Biology is the disciplined study of living organisms. It is also a vital part of liberal education, enabling students to develop an appreciation of their own biological nature as well as of the great variety of organisms and communities of organisms with which they come into contact and upon which they are dependent.

The study of biology may be at many levels: molecular, cellular, organismic, population, community, ecosystem, evolutionary. The department offers instruction at each of these levels designed to meet the requirements for graduate study, for professional schools, and for teaching careers in biology or for working in industrial or governmental positions.

The Biology Department is housed in both the Neils Science Center and the new Center for the Sciences, teaching-research facilities with state-of-the-art equipment such as advanced research light microscopes and an electron microscope. Nearly all biology courses have a laboratory component and all field or laboratory classes are taught by professors or other experienced faculty. The department makes extensive field trips for its organismal biology laboratory courses to the Indiana Dunes National Lakeshore, which ranks third of all national parks in species diversity, and at other distinguished natural history institutions in the Chicago area. Biology majors are encouraged to conduct research under the supervision of faculty members. Majors also have opportunities to study abroad at the University's overseas centers or at affiliated institutions as well as at recognized programs sponsored by national laboratories and other distinguished institutions.

## Pre-Medical Arts Programs

A major in biology is an appropriate preparation for admission into professional schools and programs such as medicine, dentistry, hospital administration, medical technology, optometry, physical therapy, podiatry, public health, veterinary medicine, and other allied health fields. Further information may be obtained from the chair of the department or members of the Committee on Pre-Medical Arts.

Bachelor of Arts - Biology Major (Minimum 28 Cr.)

| BIO 171 | Unity of Life | $3+3,4 \mathrm{Cr}$. |
| :---: | :---: | :---: |
| BIO 172 | Diversity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 270 | Genetics and Genome Evolution | $3+3,4 \mathrm{Cr}$. |
| Two courses from BIO 290 to BIO 380 |  |  |
| Two courses from BIO 420 to BIO 490 |  |  |
| Two credits from the following options: |  |  |
| BIO 493 | Seminar in Biology | 1 Cr . |
| AND/OR BIO 496 | Research in Biology | 1-2 Cr. |
| Additional Required Courses |  |  |
| Two semesters of general chemistry |  |  |
| Please see the de 49 for more infor | of the Bachelor of Arts requi |  |

## Bachelor of Science - Biology Major (Minimum 28 Cr.)

| BIO 171 | Unity of Life | 3+3, 4 Cr . |
| :---: | :---: | :---: |
| BIO 172 | Diversity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 270 | Genetics and Genome Evolution | $3+3,4 \mathrm{Cr}$. |
| Two courses from BIO 290 to BIO 380 |  |  |
| Two courses from BIO 420 to BIO 490 |  |  |
| Two credits from the following options: |  |  |
| BIO 493 | Seminar in Biology | 1 Cr . |
| AND/OR BIO 496 | Research in Biology | 1-2 Cr. |
| Additional Required Courses |  |  |
| Two semesters of general chemistry and one semester of organic chemistry |  |  |
| Second major in another science (Please see the description of the Bachelor of Science requirements on page 55 for more information.) |  |  |

## Bachelor of Science - Biology Major (Minimum 32 Cr.)

| BIO 171 | Unity of Life | 3+3, 4 Cr . |
| :---: | :---: | :---: |
| BIO 172 | Diversity of Life | 3+3, 4 Cr . |
| BIO 270 | Genetics and Genome Evolution | $3+3,4 \mathrm{Cr}$. |
| Two courses from BIO 290 to BIO 380 |  |  |
| Two courses from BIO 420 to BIO 490 |  |  |
| Two credits from the following options: |  |  |
| BIO 493 | Seminar in Biology | 1 Cr . |
| AND/OR BIO 496 | Research in Biology | 1-2 Cr. |
| Four credits from BIO 290 to BIO 498 |  |  |
| Additional Required Courses |  |  |
| Two semesters of general chemistry and one semester of organic chemistry |  |  |
| Please see the description of the Bachelor of Science requirements on page 55 for more information. |  |  |


| Bachelor of Science - Biology Major (Minimum 40 Cr . Maximum |  |  |
| :---: | :---: | :---: |
| BIO 171 | Unity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 172 | Diversity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 270 | Genetics and Genome Evolution | $3+3,4 \mathrm{Cr}$. |
| Two courses from BIO 290 to BIO 380 |  |  |
| Two courses from BIO 420 to BIO 490 |  |  |
| Two credits from BIO 493 | Seminar in Biology | 1 Cr . |
| Two credits from BIO 496 | Research in Biology | 1-2 Cr. |
| At least six additional credits from BIO 290 to BIO 499 |  |  |
| Additional Required Courses |  |  |
| Two semesters of chemistry. | neral chemistry and one seme |  |

Note: Neither BIO 486 nor BIO 489 may be counted toward any of the above departmental majors.
Depending on career goals and special requirements for graduate schools and professional programs, majors are advised to include in their plans of study courses in advanced chemistry, advanced mathematics including calculus, computer science, physics, and statistics.

General Biology Minor (Minimum 15 Cr.)

| BIO 171 | Unity of Life | $3+3,4 \mathrm{Cr}$. |
| :--- | :--- | :--- |
| BIO 172 | Diversity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 270 | Genetics and Genome Evolution | $3+3,4 \mathrm{Cr}$. |
| Three additional credits from | BIO 290 to BIO 490 |  |

## Human Biology Minor (Minimum 15 Cr.)

| BIO 151 | Human Anatomy and Physiology I | $3+3,4 \mathrm{Cr}$. |
| :--- | :--- | :--- |
| BIO 152 | Human Anatomy and Physiology II | $3+3,4 \mathrm{Cr}$. |
| Seven additional credits from BIO 210 to BIO 490 |  |  |

Note: Neither BIO 486 nor BIO 489 may be counted toward the above departmental minors. Additionally, Exercise Science majors may use BIO 205 for the additional biology credits required for the Human Biology Minor.

## Biology Research Intensive Concentration

The Research Concentration is intended for students primarily interested in pursuing graduate study. Qualifying students may participate in this highly-selective program. Applications and additional information about this program are available from the office of the chair of the department.

| Biology Research Intensive Concentration within Bachelor of Science <br> (Minimuim 33 Cr.) |  |  |
| :--- | :--- | ---: |
| BIO 171 | Unity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 172 | Diversity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 195 | Introduction to Biological Research | 1 Cr |
| BIO 270 | Genetics and Genome Evolution | $3+3,4 \mathrm{Cr}$ |
| BIO 496 | Research in Biology | 6 Semesters |

Two courses from BIO 290 to BIO 380
Two courses from BIO 420 to BIO 490
Additional Required Courses
Two semesters of general chemistry and one semester of organic
chemistry.
Please see the description of the Bachelor of Science requirements on page 55 for more information.
Note: Must achieve and maintain a GPA of 3.0, both in the major and overall, to qualify for, and remain in, this program.

Note: Neither BIO 486 nor BIO 489 may be counted toward the above departmental major.

## Secondary Education Majors

Students intending to meet licensure requirements for secondary education with biology as their primary content area must complete a B.S. major of at least 32 credit hours in biology, which must include BIO 440, 460, 493 (Immunology), and either 430 or 450. Also required are ED 390 and NS 490. For more information on the requirements for the Secondary Education major, see page 119.


Two semesters of general chemistry and one semester of organic
chemistry.
Complementary Secondary Education Major
Note: Neither BIO 486 nor BIO 489 may be counted toward the above departmental major.

## Field Station

Valparaiso University has a partnership with a biological field station in southern Michigan called Pierce Cedar Creek Institute. Funding is available through PCCI for student/faculty summer research collaborations at the field station. See the department chair for more information.

## Biology Club

Students with an interest in biology are invited to join the Biology Club.

## Senior Assessment Examination

All graduating seniors will take the Biology Assessment Examination during their final semester of biology instruction. See the chair of the department for details.

## Approval of Schedules

All students taking majors or minors in biology and all students planning to teach biological subjects must have their schedules approved by their academic advisors at the beginning of each semester.

Note: Entering students who satisfy requirements for Biology 171 and 172 or equivalent by passing the College Level Examination Program (CLEP) examination in Biology or the Advanced Placement Examination (AP) in Biology are granted 8 credit hours toward graduation. Students who pass the International Baccalaureate (IB) Examination in Biology are granted 4 credit hours for BIO 171.

## Biology Courses

## Biotechnology

$3+2,4 \mathrm{Cr}$.
An introductory study of modern biology in which those aspects of biotechnology that affect the welfare of humanity are emphasized. This course is recommended for non-science majors who wish to take a biology course for partial fulfillment of the General Education Requirements in Natural Science and includes a laboratory component. Not open to students who have received credit for BIO 151 or 171. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

Human Anatomy and Physiology I
3+3, 4 Cr.
An introductory study of the physiochemical nature of cells and tissues, cell division and human genetics, the musculoskeletal system, the nervous system and special senses, and chemical control. Course includes a laboratory component. May be used in partial fulfillment of the General Education Requirements in Natural Science. This course is required for nursing, physical education, and some allied health students. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment. Students may register concurrently for MATH 110 and BIO 151.

Human Anatomy and Physiology II
$3+3,4 \mathrm{Cr}$.
A continuation of Human Anatomy and Physiology I. A study of hematology and the anatomy and physiology of the following organ systems: cardiovascular, respiratory, digestive, excretory, endocrine, and reproductive. Course includes a laboratory component. May be used for partial fulfillment of the General Education Requirements in Natural Science. Prerequisite: BIO 151, MATH 110, or placement higher than MATH 110 on the math placement assessment.

Unity of Life
$3+3,4 \mathrm{Cr}$.
A study of organic molecules, cells, tissues, and organs for biology majors and general biology minors. Emphasis is placed on the principles which unify all living forms: structure, energetics, physiology, inheritance, and development. Course includes a laboratory component. May be used in partial fulfillment of the General Education Requirements in Natural Science. This course is required for biology majors and general biology minors including pre-medical and some other pre-professional students. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

Diversity of Life
3+3, 4 Cr .
A survey of the kingdoms of organisms, their relationships and origins, and their roles in the economy of nature. Emphasis is on the structures and their functions, life cycles, development, distribution, ecology, evolution, and the social and economic importance of representative members. Course includes a laboratory component. Field trips are required. May be used in partial fulfillment of the General Education Requirements in Natural Science. Prerequisite: Grade of C- or higher in BIO 171 or 151, or equivalent, or consent of the chair of the department; MATH 110 or placement higher than MATH 110 on the math placement assessment.

Introduction to Biological Research 1 Cr .
An introduction to biological research methods and literature. Laboratory work is required. Typically taken in spring semester of the freshman year. Prerequisite: BIO 171 and consent of the chair of the department. S/U grade only.

Fundamental Nutrition
3 Cr .
A study of the basic principles of human nutrition. Emphasis is on practical application and includes a focus on sports nutrition. Not open to students who have received credit for BIO 260.

Microbiology
$3+3,4 \mathrm{Cr}$.
A study of bacteria, viruses, and other microorganisms. Major emphasis is given to understanding infectious disease and immunology. Course includes a laboratory component. Prerequisites: BIO 151 or 171 and CHEM 111 or 121.

Fundamental Microbiology for Engineers 3 Cr .
A fundamental study of the structure, function, and growth of microorganisms. Roles of microorganisms in industry and the environment will be considered. Open only to students enrolled in the College of Engineering with sophomore standing or above, or with consent of the department chair. Prerequisite: CHEM 115.

A study of the relationships between humans, technology, and the environment. Emphasis is placed on ecological principles, human population growth, resources, and pollution. May be used by Elementary Education majors to fulfill the conservation requirement. Field trips are required.

BIO 270 Genetics and Genome Evolution 3+3, 4 Cr.
An introductory study of the basic laws of genetics, the physical and chemical basis of inheritance, genes as functional and structural units of heredity and development, mutation, variation, and evolution of genomes. Human genetics and social implications are discussed. Course includes a laboratory component. May be used in partial fulfillment of the General Education Requirements in Natural Science. Prerequisite: Grade of C- or higher in BIO 172 or 152, or equivalent.

Mathematical Models of Infectious Disease 3 Cr .
(Also offered as MATH 321.) An application of mathematical methods and concepts to the study of infectious diseases. Analysis of outbreaks and control methods (such as vaccinations) using differential equations and elementary matrix algebra. Prerequisite: MATH 131 and one of STAT 140, STAT 240, or PSY 201. This course is usually offered online during the summer semester.

BIO 330 Arthropods and Disease 3 Cr .
A study of the arthropods that cause disease in humans and animals. The course will focus on the biology of the arthropods that make them effective vectors of disease. Control of arthropod borne disease will be discussed. Topics will change as new diseases emerge, but possible topics include: mosquito biology, malaria, dengue hemorrhagic fever, bed bugs, and Lyme disease. Prerequisite: BIO 172.

Human Molecular Genetics
3 Cr .
An expansion of principles covered in BIO 270, Genetics and Genome Evolution. This course explores complications of simple Mendelian genetics and related genetic technologies. Topics may include human genome mapping, sequencing and evolution, complex genetic traits, gene therapy, genetic testing, and DNA fingerprinting. Special attention is given to the ethical issues raised by emerging technologies in genetics. Prerequisite: BIO 270.
Human Nutrition
3 Cr .
Basic principles of human nutrition including nutrient functions, recommendations, and food sources. Not open to students who have received credit for BIO 205. Prerequisite: CHEM 111, BIO 151, and BIO 152, or consent of the chair of the department.

## Biological Topics

2-4 Cr.
A consideration of various topics in biology through lectures, laboratory work, field work, and conferences. The topics are related to staff and student interests. May be taken more than once if topics are different. Course may include a laboratory component. Prerequisite: certain topics may have specific course requirements. Examples of probable offerings are Tissue Culture, and Parasitology.

Evolution
3 Cr
This course explores the principles of modern evolutionary biology. Topics include the history of life on earth, population genetic models to explore evolutionary change, and molecular and phylogenetic approaches to understanding evolutionary theory. The application of evolutionary theory to medicine and ecology will also be covered. Prerequisite: BIO 270.

## Comparative Vertebrate Anatomy

$2+3,3 \mathrm{Cr}$
A comparative study of representative vertebrate animals, with emphasis on evolution, structures, functions, and laboratory dissections. Course includes a laboratory component. Prerequisite: BIO 152 or 172.

路 is is

## BIO 370

Organization and function of the vertebrate nervous system from the tissue to the organismal levels, with focus on cellular and molecular neurobiology. Main topics include the electrochemical bases of neural communication, cellular bases of sensations, motor behaviors, and homeostasis. Students will read primary literature. Prerequisite: BIO 151 or 171 required; CHEM 121 or 131 recommended.

Principles of Human Physiology 3 Cr .
A study of the function of and interactions between organ systems and the mechanisms that regulate their physiology. Emphasis is placed on the basic principles of homeostasis and an introduction to disease physiology and drug actions. Prerequisite: BIO 172 and junior standing. Not open to students with credit for BIO 151 or BIO 152.

## Developmental Biology

$3+3,4 \mathrm{Cr}$.
An introduction to the descriptive and analytic study of animal development and growth, with emphasis on vertebrate animals. Course includes a laboratory component. Prerequisite: BIO 270.

Plant Biology
3+3, 4 Cr.
An introduction to the principles and methods of plant systematics and their use in the understanding of plant form, function, and natural history. Laboratories emphasize how genomics is shaping views of plant evolution. Laboratory work will also include a survey of plant taxonomy with an emphasis on the flora of the Midwest. Field trips required. Prerequisite: BIO 270.

Insect Biology
3+3, 4 Cr.
A study of the biology of insects including their morphology, reproduction, feeding behaviors, and evolutionary successes. The lab requires an insect collection and collecting field trips are required. Prerequisite: BIO 172.

## Ecology

$3+4,4 \mathrm{Cr}$.
A study of organisms in relationship to their physical and biotic environment. There is considerable field work in local terrestrial and aquatic habitats. Field trips are required. Course includes a laboratory component. Prerequisite: BIO 172 and preferably a prior field course.

Forensic Biology
$3+3,4 \mathrm{Cr}$
A study of the biological fields associated with forensic science. Forensic entomology, anthropology, botany, taphonomy, and serology will be discussed in detail. The laboratory will focus on field collection techniques and evidence recovery of biological specimens. Field trips are required. Prerequisite: BIO 172.

Molecular Biology 3+3, 4 Cr.
A study of the molecular basis of genetic interactions and processes in prokaryotic and eukaryotic organisms. Laboratories emphasize standard microbiological techniques as well as recent advances in gene cloning and molecular genetics. Prerequisites: BIO 270 and CHEM 221.

Cell Biology
3+3, 4 Cr.
A study of the fundamental physiological activities of animal and plant cells and tissues. The course includes lectures, assigned readings, and laboratory work in cell structure, organelles, energy transformation, membrane transport, excitability, contraction, and signal transduction. Prerequisite: BIO 270 and CHEM 221.

## Internship in Biological Science

0.5-2 Cr.

Students gain experience in biology by working for private or public research/diagnostic labs, state or federal agencies, environmental consulting firms, nonprofit environmental groups, or other appropriate organizations. Final written report required. This course may not be counted toward a major or a minor in this department. S/U grade only. Prerequisite: major or minor in biology and consent of the chair of the department.

Biological Topics
2-4 Cr.
A consideration of various topics in biology through lectures, laboratory work, field work, and conferences. The topics are related to staff and student interests. May be taken more than once if topics are different. Prerequisite: certain topics may have specific course requirements.

| BIO 493 | Seminar in Biology <br> Student and staff presentation and discussion of selected topics in biology. Current topics are Animal Behavior, Biological Controversies, Embryology, Immunology, and Diet and Disease. Intended for seniors. Prerequisites: 12 credit hours in Biology or consent of the chair of the department; certain topics may have specific course prerequisites. Normally three topics are offered each semester so that during a two-year period a broad spectrum of topics is available. A maximum of four seminars (on different topics) may be credited toward graduation. S/U grade optional. |
| :---: | :---: |
| BIO 494 | Pre-Medical Arts Colloquium <br> (Also offered as CHEM 494.) All Pre-Medical Arts students are encouraged to register for this course every semester. May not be counted for a major or minor. S/U grade. |
| BIO 496 | Research in Biology <br> Special research problems. Prerequisites: 12 credit hours of biology, prior approval of a supervising instructor and the chair of the department is required. May be repeated for additional credit. S/U grade optional. |
| BIO 497 | Honors Work in Biology <br> See Honors Work, page 63. |
| BIO 498 | Honors Candidacy in Biology <br> See Honors Work, page 63. |
| BIO 499 | Biology Colloquium <br> Biology majors and minors are encouraged to register for this course. Colloquium presents insights into the living world beyond the material found in regular course offerings. S/U grade. |

## Chemistry

Learn more about the Department of Chemistry at Valpo online.

Associate Professors Engerer (chair), Goyne, Holt, K. Jantzi, Peller, Schoer; Assistant Professors R. Clark, C. Iceman, Pruet, Rowe; Lecturer Leach.

Chemistry is the discipline that studies the fundamental nature of matter and the changes in energy and properties accompanying compositional changes in matter. As a scientific discipline, chemistry is firmly rooted in the liberal arts tradition, placing emphasis on the development of intellectual capability and judgment. Yet it is also a very practical discipline dealing with the fundamental technology of matter that affects our environment and our society. Because of the nature of the discipline, a wide diversity of careers is possible with a chemistry major. These range from industrial product development to academic research, from medical and paramedical careers to forensic (law enforcement) chemistry. Government, industry, schools, and universities and many private institutions, such as museums, have a variety of openings for chemists. About two-thirds of Valparaiso University's chemistry graduates continue their education in graduate, medical, or professional school. In almost every instance, those who go to graduate school receive complete financial support in the form of a fellowship or an assistantship.

The programs of the department provide balance between theoretical and practical aspects of chemistry. Opportunities for carrying out directed or honors work research are available. A wide selection of instruments is maintained for student use in instructional laboratory work and research. The department is approved by the American Chemical Society for the training of professional chemists, including the biochemistry option, and the Beta Sigma Chapter of the Phi Lambda Upsilon Chemistry Honorary Society is located here. A student may choose to work toward a Bachelor of Arts degree or a Bachelor of Science degree in chemistry or a Bachelor of Science degree in biochemistry.

## Pre-Medical Arts Programs

A major in chemistry or biochemistry is an appropriate preparation for admission into professional schools and programs such as medicine, dentistry, hospital administration, medical technology, optometry, osteopathy, physical therapy, podiatry, public health, veterinary medicine, and other allied health fields. Further information may be obtained from the chair of the department or members of the Committee on Pre-Medical Arts.

## Chemical Engineering

The College of Engineering offers a minor in engineering. Combining an engineering minor with a major in chemistry will prepare students who wish to pursue further studies in chemical engineering. Further information may be obtained from the chair of the Chemistry Department or the College of Engineering assistant dean for student success.

## Major

The Department of Chemistry offers two majors, chemistry and biochemistry, with five degree options. In addition to the courses listed below, all majors are expected to register for CHEM 499 Chemistry Colloquium every semester.

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| CHEM 121 | General Chemistry I | 3+3, 4 Cr . |
| CHEM 131 | General Chemistry I- Honors | $3+3,4 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| CHEM 122 | General Chemistry II | $3+3,4 \mathrm{Cr}$. |
| CHEM 132 | General Chemistry II - Honors | $3+3,4 \mathrm{Cr}$. |
| CHEM 221 | Organic Chemistry I | $3+3,4 \mathrm{Cr}$. |
| CHEM 222 | Organic Chemistry II | $3+3,4 \mathrm{Cr}$. |
| CHEM 230 | Quantitative Analysis | $3+4,4 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| CHEM 311 | Elementary Physical Chemistry | $3+3,4 \mathrm{Cr}$. |
| CHEM 315 | Biochemistry I | 3 Cr . |
| CHEM 321 | Physical Chemistry I | $3+34 \mathrm{Cr}$. |
| Three (or four) additional credits from $\mathbf{3 0 0}$ or $\mathbf{4 0 0}$ level Chemistry courses. |  |  |

## Bachelor of Science - Chemistry Major - Double Science Major (Minimum 27 Cr .)

One course from the following options:

| CHEM 121 | General Chemistry I | 3+3, 4 Cr . |
| :---: | :---: | :---: |
| CHEM 131 | General Chemistry I-Honors | $3+3,4 \mathrm{Cr}$. |
| ne course from the following options: |  |  |
| CHEM 122 | General Chemistry II | 3+3, 4 Cr . |
| CHEM 132 | General Chemistry II - Honors | $3+3,4 \mathrm{Cr}$. |
| HEM 221 | Organic Chemistry I | $3+3,4 \mathrm{Cr}$. |
| HEM 222 | Organic Chemistry II | $3+3,4 \mathrm{Cr}$. |
| HEM 230 | Quantitative Analysis | $3+4,4 \mathrm{Cr}$. |
| ne course from the following options: |  |  |
| CHEM 311 | Elementary Physical Chemistry | 3+3, 4 Cr . |
| CHEM 321 | Physical Chemistry I | $3+3,4 \mathrm{Cr}$. |

Three additional credits from $\mathbf{3 0 0}$ or $\mathbf{4 0 0}$ level Chemistry courses.
Must be combined with a minimum major in another science (see page 55),

## Bachelor of Science - Chemistry Major (Minimum 32 Cr.)

One course from the following options:

| CHEM 121 | General Chemistry I | $3+3,4 \mathrm{Cr}$. |
| :--- | :--- | :--- |
| CHEM $\mathbf{1 3 1}$ | General Chemistry I-Honors | $3+3,4 \mathrm{Cr}$. |
| course from the following options: |  |  |
| CHEM 122 | General Chemistry II | $3+3,4 \mathrm{Cr}$. |
| CHEM $\mathbf{1 3 2}$ | General Chemistry II Honors | $3+3,4 \mathrm{Cr}$. |

One course from the following options:

| CHEM 190 | Introduction to Chemical Research (7 weeks) | 1 Cr . |
| :---: | :---: | :---: |
| CHEM 496 | Directed Research in Chemistry | 1 Cr . |
| CHEM 221 | Organic Chemistry I | 3+3, 4 Cr . |
| CHEM 222 | Organic Chemistry II | 3+3, 4 Cr . |
| CHEM 230 | Quantitative Analysis | $3+4,4 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| CHEM 311 | Elementary Physical Chemistry | 3+3, 4 Cr . |
| CHEM 321 | Physical Chemistry I | $3+3,4 \mathrm{Cr}$. |

Seven additional credits from $\mathbf{3 0 0}$ or $\mathbf{4 0 0}$ level Chemistry courses.

## ACS Certified Bachelor of Science - Chemistry Major (Minimum 42 Cr.)

This degree option meets the guidelines of the American Chemical Society.

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| CHEM 121 | General Chemistry I | 3+3, 4 Cr . |
| CHEM 131 | General Chemistry I - Honors | 3+3, 4 Cr . |
| One course from the following options: |  |  |
| CHEM 122 | General Chemistry II | 3+3, 4 Cr . |
| CHEM 132 | General Chemistry II - Honors | 3+3, 4 Cr . |
| CHEM 190 | Introduction to Chemical Research (7 weeks) | 1 Cr . |
| CHEM 221 | Organic Chemistry I | 3+3, 4 Cr . |
| CHEM 222 | Organic Chemistry II | 3+3, 4 Cr . |
| CHEM 230 | Quantitative Analysis | $3+4,4 \mathrm{Cr}$. |
| CHEM 315 | Biochemistry I | 3 Cr . |
| CHEM 321 | Physical Chemistry I | 3+3, 4 Cr . |
| CHEM 322 | Physical Chemistry II | 3+3, 4 Cr . |
| CHEM 421 | Advanced Inorganic Chemistry | 3 Cr . |
| CHEM 422 | Inorganic Chemistry Laboratory | 0+6, 2 Cr . |
| CHEM 496 | Directed Research in Chemistry | 2 Cr . |
| Three additional credits from 300 or 400 level Chemistry courses. |  |  |
| PHYS 141 and 142 (with labs) and MATH 260 and 270 are required for certification. |  |  |
| CHEM 496 may be taken instead as the Honors Work sequence, CHEM 497 and 498. |  |  |

## ACS Certified Bachelor of Science - Biochemistry Major <br> (Minimum 42 Chemistry Cr. and 12 Biology Cr.)

This degree option meets the guidelines of the American Chemical Society.

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| CHEM 121 | General Chemistry I | 3+3, 4 Cr. |
| CHEM 131 | General Chemistry I-Honors | 3+3, 4 Cr . |
| One course from the following options: |  |  |
| CHEM 122 | General Chemistry II | 3+3, 4 Cr. |
| CHEM 132 | General Chemistry II - Honors | 3+3, 4 Cr. |
| CHEM 190 | Introduction to Chemical Research (7 weeks) | 1 Cr . |
| CHEM 221 | Organic Chemistry I | 3+3, 4 Cr. |
| CHEM 222 | Organic Chemistry II | 3+3, 4 Cr . |
| CHEM 230 | Quantitative Analysis | $3+4,4 \mathrm{Cr}$. |
| CHEM 315 | Biochemistry I | 3 Cr . |
| CHEM 316 | Biochemistry II | 3 Cr . |
| CHEM 321 | Physical Chemistry I | 3+3, 4 Cr . |
| CHEM 322 | Physical Chemistry II | 3+3, 4 Cr. |
| CHEM 417 | Biochemistry Laboratory | 0+6, 2 Cr . |
| CHEM 421 | Advanced Inorganic Chemistry | 3 Cr . |
| CHEM 496 | Directed Research in Chemistry | 2 Cr . |
| BIO 171 | Unity of Life | 3+3, 4 Cr. |
| BIO 270 | Genetics and Genome Evolution | 3+3, 4 Cr . |
| One course from the following options: |  |  |
| BIO 450 | Molecular Biology | 3+3, 4 Cr. |
| BIO 460 | Cell Biology | 3+3, 4 Cr . |

PHYS 141 and 142 (with labs) and MATH 260 and 270 are required for certification.
The research conducted in CHEM 496 should be in the area of Biochemistry. It may also be taken as BIO 496, or the Honors Work sequence CHEM 497 and 498.

## Chemistry Minor (Minimum 16 Cr.)

A minimum of 16 credit hours in chemistry, including at least 8 credits numbered 200 and above, constitutes a minor.

## Secondary Education Majors

Students intending to meet licensure requirements for secondary education with chemistry as their primary content area must complete a B.S. major of at least 32 credits in chemistry. In the 32-credit major, CHEM 315 and 421 must be included. Also required are CHEM 499, MATH 131, ED 390, NS 490, and 8 credits of physics.

## Chemistry Club

The Chemistry Club, an affiliate of the American Chemical Society, provides extracurricular opportunities for students interested in chemistry.

## Cooperative Education

Qualified students may combine semesters in chemical research at a professional work site with other semesters of traditional academic studies on campus. Although this program will probably extend the participating student's college education beyond the normal four years, the students will be financially reimbursed by the cooperating employer and also receive credit toward the chemistry major. No more than six credits earned in Cooperative Education may be applied toward minimum requirements of the major in Chemistry. Enrollment in this program is limited by the availability of positions offered by suitable cooperating companies. Eligible students are junior or senior chemistry majors who have completed CHEM 222, with a cumulative grade point average of 2.50 in their mathematics and science courses. For further information, refer to Cooperative Education, College of Arts and Sciences, page 63.

## Credit by Examination

Credit for CHEM 121 and 122 may be earned through the College Level Examination Program subject examination in General Chemistry or through the Advanced Placement Examination in Chemistry. Credit for CHEM 121 may be earned through the International Baccalaureate Program subject examination in Chemistry.

## Approval of Schedules

All students taking a major or a minor in chemistry must have their schedules approved by their departmental advisor at the beginning of each semester.

## Chemistry Courses

CHEM 111 Introduction to Chemistry 3+2, 4 Cr.
A one semester overview of general, organic, and biochemistry. Intended for non-science majors who elect chemistry to meet one part of the natural science requirement. Course includes a laboratory component. Students with a major or minor in elementary education, nursing, or physical education ordinarily take this course to meet their chemistry requirement. Not open to students with credit for CHEM 115, 121, or 131. Students may take CHEM 111 prior to taking CHEM 121, but may not use both courses toward a chemistry major or minor, or toward fulfillment of the General Education Requirements in Natural Science. Prerequisite: Grade of C- or higher in MATH 110 or placement higher than MATH 110 on the math placement process.

CHEM 115 Essentials of Chemistry for Engineers 3+2,4Cr.
A one semester introductory course in the principles of chemistry for engineering students. Course includes a laboratory component. Not open to students with credit for CHEM 121 or CHEM 131. Prerequisite: Math 131 and enrollment in the College of Engineering, or consent of the chair of the department.

CHEM 116 Applications of Chemistry in Engineering 3+3, 4 Cr.
A continuation of CHEM 115; offering additional principals of chemistry for engineering students, especially civil engineering students, with emphasis on analytical chemistry. Course includes a laboratory component. Not open to students with credit for CHEM 122 or CHEM 132. Prerequisite: CHEM 115 and enrollment in the College of Engineering, or consent of chair of the department.
CHEM 120 General Chemistry Peer Learning 0 Cr.
An optional structured study session in which teams of students work together to develop and improve their problem solving, professional communication, and study skills in general chemistry. May be repeated. S/U grade only. Co-requisite: CHEM 121 or CHEM 122.

CHEM 121 General Chemistry I
$3+3,4 \mathrm{Cr}$.
An introductory course in the principles of chemistry for science majors. The first of a two semester sequence. Course includes a laboratory component. Required of majors and minors in chemistry and students in premedical, pre-dental, or medical technology programs, except for students who take CHEM 131. Not open to students with credit for CHEM 115 or CHEM 131. Not open to students in the College of Engineering except with permission of the chair of the department. Prerequisite: CHEM 111, or placement of CHEM 121 or CHEM 131 on the chemistry placement examination, or grade of C- or higher in MATH 111 or placement higher than MATH 111 on the math placement process.

CHEM 122 General Chemistry II 3+3,4 Cr.
A continuation of CHEM 121 with an emphasis on descriptive inorganic chemistry. Course includes a laboratory component. Not open to students with credit for CHEM 116 or CHEM 132. Prerequisite: Grade of C- or higher in CHEM 115, 121, or 131.

CHEM 131 General Chemistry I Honors 3+3, 4 Cr .
Same lecture as CHEM 121, with a more challenging, in-depth laboratory program. Course includes a laboratory component. Intended for students who are willing to intensify their learning. Recommended for chemistry majors. Not open to students with credit for CHEM 115 or CHEM 121. Prerequisite: placement of CHEM 131 on the chemistry placement examination, or consent of instructor.

CHEM 132 General Chemistry II - Honors 3+3, 4 Cr .
A continuation of CHEM 131. Same lecture as CHEM 122, with a more challenging, in-depth laboratory program. Course includes a laboratory component. Intended for students who are willing to intensify their learning. Recommended for chemistry majors. Not open to students with credit for CHEM 116 or CHEM 122. Prerequisite: CHEM 131 or consent of instructor.

CHEM 190
Introduction to Chemical Research
$0+1.5,1 \mathrm{Cr}$.
7 weeks. An introduction to chemical research methods and literature. A laboratory project is required. Prerequisite: CHEM 121 or 131. S/U grade.

| CHEM 221 | Organic Chemistry I <br> An introductory survey of the nomenclature, reactions, structures, and properties of carbon compounds. Course includes a laboratory component. Prerequisite: Grade of C- or higher in CHEM 116, 122, or 132. |
| :---: | :---: |
| CHEM 222 | Organic Chemistry II <br> A continuation of CHEM 221. A further study of the reactions, structures, and properties of carbon compounds, including reaction mechanisms and complex organic reactions. Course includes a laboratory component. Prerequisite: Grade of C- or higher in CHEM 221. |
| CHEM 230 | Quantitative Analysis $3+4,4 \mathrm{Cr} .$ <br> A study of the theory of chemical equilibria, electrochemistry, and elementary chemical analysis. Course includes a laboratory component. The laboratory work consists of an introduction to gravimetric, volumetric, and instrumental methods of analysis. Prerequisite: Grade of C- or higher in CHEM 116, 122, or 132 or consent of chair of the department. |
| CHEM 290 | Perspectives on Chemistry <br> Topics related to chemistry. May not be counted toward a major or minor in chemistry. |
| CHEM 311 | Elementary Physical Chemistry $3+3,4 \mathrm{Cr} .$ <br> A one-semester course in physical chemistry covering elementary thermodynamics and kinetics, together with their applications to various chemical systems. Course includes a laboratory component. Prerequisite: CHEM 221, CHEM 230, MATH 131, and PHYS 111 or 141 (may be taken concurrently). Not open to students who have taken CHEM 321. |
| CHEM 315 | Biochemistry I <br> Structure and function of proteins, carbohydrates, and lipids with particular stress on physical biochemistry and enzyme kinetics. Overview of metabolism with an emphasis on integration and control. Prerequisite: Grade of Cor higher in CHEM 222. Recommended: CHEM 230. |
| CHEM 316 | Biochemistry II <br> A continuation of CHEM 315 that is focused on the biosynthesis of nucleic acids and proteins and the regulation of these processes. Special topics in biochemistry. Prerequisite: Grade of C- or higher in CHEM 315. |
| CHEM 321 | Physical Chemistry I $3+3,4 \mathrm{Cr} .$ <br> A theoretical study of chemistry involving thermodynamics, kinetics, and modern structural concepts. Course includes a laboratory component. Prerequisites: CHEM 221, CHEM 230, MATH 132, PHYS 142. Recommended: MATH 270. |
| CHEM 322 | Physical Chemistry II $3+3,4 \mathrm{Cr} .$ <br> A continuation of CHEM 321. Course includes a laboratory component. Prerequisite: Grade of C- or higher in CHEM 321. |
| CHEM 340 | Forensic Chemistry $2+3,3 \mathrm{Cr} .$ <br> A study of the chemical fields associated with forensic science, including toxicology, illicit drug analysis, and trace evidence analysis. Course includes a laboratory component. The course will focus on procedures and instrumentation that are commonly employed in a forensic chemistry laboratory, such as evidence collection and preparation for analysis, spectrophotometry, chromatography, and microscopy. Prerequisite: CHEM 230. |
| CHEM 381 | Cooperative Education in Chemistry I <br> Experience in chemical research with a cooperating employer. Written report required. Prerequisites: CHEM 222 and approval of the chair of the department. S/U grade. |
| CHEM 390 | Topics in Chemistry <br> A study of various topics in chemistry. Prerequisite: dependent upon the topic. |
| CHEM 417 | Biochemistry Laboratory $\text { 0+6, } 2 \mathrm{Cr} .$ <br> An introduction to the experimental methods used to characterize biomolecules and biochemical reactions. Prerequisite: CHEM 315. |
| CHEM 421 | Advanced Inorganic Chemistry <br> A study of advanced topics in inorganic chemistry with emphasis on structure and bonding, transition metal chemistry, and organometallic chemistry. Prerequisite: CHEM 222 and ( 311 or 321 ) or consent of the chair of the department. |

See Honors Work, page 63.

See Honors Work, page 63.
Chemistry Colloquium 0 Cr .
All Chemistry majors are expected to register for this course every semester. Report required in this forum for all those registered for CHEM 496. S/U grade only.

## Communication

Learn more about the Department of Communication at Valpo online.

## Professor Lutze; Associate Professors Powell, Steinwart (chair), Ziegler; Assistant Professors Ahn, C. Anderson; Lecturers Douglas, Oren.

The Department of Communication focuses on teaching the process of communication from the development of strategic messages to their delivery through contemporary digital media and other modalities. In all of our courses, the department encourages students to become ethical, critical, and effective sources and receivers of communication; we also endeavor to motivate our students to serve their community. The department stresses solid preparation in the liberal arts and seeks a balance between liberal arts and skills courses within the department, believing this balance to be essential to developing good communicators, not just technicians trained for particular jobs. The department's programs also strive to demonstrate the connections between communication studies and the myriad issues affecting our global community.

## Major

A major consists of 33 credit hours in either Communication (including one of the optional concentrations of Journalism or Public Relations) or Digital Media. Students may not have a double major within the department or a major and a minor within the department.

| COMM 100 | Communication Processes and Practice |  | 3 Cr . |
| :---: | :---: | :---: | :---: |
| COMM 145 | Interpersonal Communication |  | 3 Cr . |
| COMM 243 | Public Communication |  | 3 Cr . |
| COMM 265 | Public Relations Principles |  | 3 Cr . |
| One course from the following options: |  |  |  |
| COMM 301 | Communication Law and Ethics |  | 3 Cr . |
| COMM 302 | Intellectual Property |  | 3 Cr . |
| One course from the following options: |  |  |  |
| COMM 345 | Leadership Communication |  | 3 Cr . |
| COMM 366 | Negotiation and Conflict Resolution |  | 3 Cr . |
| COMM 386 | Internship |  | 3 Cr . |
| COMM 499 | Capstone Senior Project |  | 3 Cr . |
| One of the following concentrations: |  |  |  |
| General Communication |  |  |  |
|  | 9 additional COMM credits |  |  |
| Journalism |  |  |  |
|  | COMM 261 | Foundations of Journalism | 3 Cr . |
|  | COMM 361 | Advanced Journalism | 3 Cr . |
| One additional course from the following options: |  |  |  |
|  | COMM 251 | Studio Television Production | 3 Cr . |
|  | COMM 271 | Cinema Production | 3 Cr . |
|  | COMM 290 | Topics in Communication (as approved for concentration) | 3 Cr . |
|  | COMM 322 | Sports Media Formats | 3 Cr . |
|  | COMM 350 | Audio Production | 3 Cr . |
|  | COMM 390 | Topics in Communication (as approved for concentration) | 3 Cr . |
|  | COMM 401 | Social Media | 3 Cr . |
|  | COMM 490 | Topics in Communication (as approved for concentration) | 3 Cr . |



## General Communication Minor (Minimum 15 Cr.)

## Any 15 credits of COMM courses

## Digital Media Minor (Minimum 15 Cr.)

| COMM 230 | Graphic Design I | $1+4,3 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| COMM 271 | Cinema Production | 3 Cr. |
| COMM 331 | Web Design | $2+2,3 \mathrm{Cr}$. |
| Two additional courses from the following options: |  |  |
| COMM 251 | Studio Television Production | 3 Cr. |
| COMM 290 | Topics in Communication (as approved for minor) | 3 Cr. |

Communication

| COMM 324 | Digital Video Art | 1+4, 3 Cr . |
| :---: | :---: | :---: |
| COMM 330 | Graphic Design II | 0+6, 3 Cr . |
| COMM 350 | Audio Production | 3 Cr . |
| COMM 371 | Advanced Cinema Production | 3 Cr . |
| COMM 380 | Television Producing and Directing | 3 Cr . |
| COMM 385 | Video Field Production | 3 Cr . |
| COMM 390 | Topics in Communication (as approved for minor) | 3 Cr . |
| COMM 450 | Documentary Production | 2+2, 3 Cr . |
| COMM 463 | Advanced Digital Photography | 1+4, 3 Cr . |
| COMM 471 | Cinema Production Workshop | 3 Cr . |
| COMM 490 | Topics in Communication (as approved for major) | 3 Cr . |
| COMM 491 | Applied Topics in Communication | 0+6, 3 Cr. |
| COMM 492 | Special Topics in Communication Practice | 2+2, 3 Cr . |

## Journalism Minor (Minimum 15 Cr.)

| COMM 100 | Communication Processes and Practice | 3 Cr |
| :--- | :--- | :--- |
| COMM 261 | Foundations of Journalism | 3 Cr. |
| COMM 361 | Advanced Journalism | 3 Cr. |
| Two additional courses from the following options: |  |  |
| COMM 251 | Studio Television Production | 3 Cr. |
| COMM 271 | Cinema Production | 3 Cr |
| COMM 322 | Sports Media Formats | 3 Cr. |
| COMM 350 | Audio Production | 3 Cr. |
| COMM 401 | Social Media | 3 Cr. |
| COMM 490 | Topics in Communication (as approved for major) | 3 Cr. |

## Public Relations Minor (Minimum 15 Cr.)

| COMM 261 | Foundations of Journalism | 3 Cr |
| :--- | :--- | :--- |
| COMM 265 | Public Relations Principles | 3 Cr. |
| $\mathbf{9}$ additional COMM credits from the following options: |  |  |
| COMM 362 | Communication Cases and Campaigns | 3 Cr. |
| COMM 363 | Public Relations: Agency Perspective | 3 Cr. |
| COMM 365 | Corporate Advocacy and Activist Communication | 3 Cr |
| COMM 401 | Social Media | 3 Cr |
| COMM 490 | Topics in Communication (as approved for major) | 3 Cr. |

## Cooperative Education

Qualifying students may participate in prearranged, approved, professional work experiences. During their employment, students are financially reimbursed by the cooperating employer. Credits earned in this program apply toward the major and may substitute for internship requirements. For further information, refer to Cooperative Education, College of Arts and Sciences, page 63.

## Cinema and Media Studies Minor

The Department of Communication also offers several courses, including COMM 271, COMM 324, COMM 270, COMM 391 as well as certain COMM 490 classes that could count toward the interdisciplinary Cinema and Media Studies Minor. For further information, refer to Cinema and Media Studies Interdisciplinary Programs, page 372.

## Degree

Students completing one of the two department majors together with the degree requirements of the College of Arts and Sciences fulfill requirements for the Bachelor of Arts degree.

## Approval of Schedules

All students pursuing a major or minor in communication must have their schedules approved by their departmental advisor at the beginning of each semester.

## Special Opportunities

## Television/Radio Studio

The department teaches all television and radio classes in its two teleproduction studios, digital sound suite, and digital video editing lab. The studios are fully equipped for all levels of video and audio production and provide a quality laboratory experience. Digital video and audio editing facilities interface with the studios and are available for student video and audio work. The Weather Studio features a WSI weather graphics satellite feed. Students are also placed as interns in area television, radio and cable stations, and at video production companies.

## Student Organizations

The department offers co-curricular opportunities with award-winning student-run campus media, including WVUR Radio The Source 95.1, VUTV campus cable channel, The Torch weekly campus newspaper, and The Beacon annual yearbook. The department sponsors a chapter of the National Communication Association's Lambda Pi Eta honor society and has an active student chapter of the Public Relations Student Society of America (PRSSA), and the student-operated SPARK public relations unit.

## Communication Courses

COMM 110 Internet Communication 3 Cr.

## COMM 100

COMM 261

COMM 145

COMM 230

COMM 243

COMM 244

COMM 251

## Communication Processes and Practice

3 Cr .
This course views communication from a critical cultural perspective. Students are introduced to the processes of communication as they operate within a global context. Students learn oral and written formats, including research design for specific areas of communication such as public communication, mass media (broadcast and print), public relations, and digital and mass communication technology.

This course introduces the history and development of the Internet as a communication medium. Taught online, but some on-campus sessions may be required.

Interpersonal Communication
3 Cr .
This course provides a study of verbal and nonverbal communication at a variety of person-centered levels, including intrapersonal, dyadic, and small groups. Emphasis is on interactive skill development in both face-toface and digital modalities, including strategies for self-presentation and relational development in personal and professional contexts.

Graphic Design I
$1+4,3 \mathrm{Cr}$.
(Also offered as ART 230.) This course provides an introduction to graphic design with emphasis on typographic solutions. Content includes computer-generated illustration, charts, and graphs to newsletter and related page layout procedures. No prior computer experience is required. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education requirements.

## Public Communication

3 Cr .
This course develops speaking and listening skills in the context of informative, persuasive, commemorative, and group presentations. Students are introduced to fundamental concepts of effective public speaking, including audience analysis, outlining, research, delivery, critical listening, evaluation, and use of appropriate aides and technology. Students work both individually and in collaboration with the instructor and other students.

Persuasion and Advocacy
3 Cr .
Theory in argumentation, advocacy, and persuasion is applied in a variety of communication contexts, with an emphasis on written advocacy. Students prepare a comprehensive final project related to their field of study.

Studio Television Production
3 Cr .
Students are introduced to the practice, techniques, and concepts related to television studio production and project management. The course covers planning and producing live, studio-environment television programs, examines different roles and responsibilities of production personnel, and provides practice using terminologies associated with producing and directing studio television productions. In addition, students gain hands-on experience producing programs for VUTV. Prerequisite: COMM 100.

Foundations of Journalism
3 Cr .
This course introduces students to basic concepts in journalism. Students learn and implement the inverted news pyramid while analyzing various writing styles. Emphasis is placed on copy editing and Associated Press style.
COMM 265 Public Relations Principles 3 Cr .

This course provides an overview of the key concepts in the field of public relations. The history, development, principles, and practices of Public Relations, including ethical considerations and societal impact, are examined.

COMM 270

COMM 271

COMM 286

OMM 290

COMM 291

COMM 301/570
Communication Law and Ethics
3 Cr.
This course provides an introduction to the legal regulation of communication in traditional and digital environments. Topics include the First Amendment, defamation and privacy, reporter privileges and rights, government regulation of broadcast media, indecent and obscene speech, commercial speech, and an introduction to copyright law. This course also explores moral and ethical dilemmas that arise in the context of media communication.

Intellectual Property
3 Cr .
This course explores legal rights in nontangible property including creative works. Emphasis is placed on copyright and trademark law, software and digital media protection, and unfair competition.

COMM 311/511 Organizational Communication
3 Cr .
This course explores communication theory and practice in complex organizations, including how language and technology shape the contemporary experience of work. A critical cultural perspective on communication allows students to explore how strategic communication and advocacy affect broader discourses about career issues and their resolution in modern life.

## COMM 322/503

Sports Media Formats

This course serves as an introduction to the sports media industry and focuses on the reporting, producing, and planning that goes into all forms of media. In addition to the how and why of sports media, the ethics of sports journalism, and the role of sports in society also will be examined. Prerequisite: Junior or Senior standing or consent of instructor.

Digital Video Art
$1+4,3 \mathrm{Cr}$.
(Also offered as ART 324.) Students create video and audio art with an emphasis on developing experimental techniques and understanding the function of time in this medium. Students work collaboratively and independently, and observe a portion of the history and aesthetics of film, video, and audio art. Prerequisite: one of ART 132, ART 163, ART 231, COMM 230, COMM 198, or consent of the instructor.

## COMM 330 <br> Graphic Design II <br> 0+6, 3 Cr.

COMM 331

COMM 345/512
(Also offered as ART 330.) Advanced problems in visual communications with emphasis on design in the commercial environment. Projects feature brand, package, and publication design and development. Field trip. Prerequisite: ART 230, COMM 230, or consent of the instructor.

Web Design
2+2, 3 Cr.
(Also offered as ART 331.) This course focuses on the use of the World Wide Web for communication objectives. It includes functions and operations of advanced web design software, integration of digital audio and video with web content, and individual projects. Includes online course content delivery components. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: ART 132, ART 230, or COMM 230.

Leadership Communication
3 Cr .
This course examines leadership communication in a variety of global and multicultural contexts. May include the topics of issue and risk communication among corporate, non-governmental (NGO), and public relations (PR) agency relationships.

COMM 350

COMM 353

COMM 360

COMM 361

COMM 362/562
Communication Cases and Campaigns
3 Cr .
This course examines and evaluates real world examples of strategic communication and explores consequences for stakeholders in a variety of contexts, including public relations, corporate communication, organizational communication, and communication law. May involve researching and writing an original case study.

Public Relations: Agency Perspective 3 Cr .
This course addresses the professional experience of working with clients in a public relations agency, including conducting public relations research, developing strategies to foster brand identification among multiple stakeholders, articulating the organization's role in corporate social responsibility, managing reputation and crisis communication, and working across multiple platforms including digital and social media.
Audio Production
3 Cr .
This course provides students with hands-on experience recording and producing a range of audio projects, both as stand-alone creative works and as complements to visual imaging. Prerequisite: COMM 251 or 271 or permission of instructor.

Media Programming
3 Cr .
This course examines the principles and practices of programming strategies for broadcast, cable, and satellite television, Internet (on-demand audio and video content), and broadcast radio and satellite audio stations. The course will integrate practices of audience analysis and programming for various formats, including their relationships to promoting and marketing programs.

Strategic Communication and Technology
3 Cr.
This course focuses on the multiple channels of traditional and emerging technologies used for communication at the personal and organizational levels. Students critically evaluate communication methods for their effectiveness in given situations.

Advanced Journalism
3 Cr .
This course provides an in-depth look into reporting practices for various types of media. Research and interviewing styles are examined as well as the difference between hard and soft news. Prerequisite: COMM 261, Junior or Senior standing, or consent of instructor.

## Corporate Advocacy and Activist Communication <br> 3 Cr.

This course examines rhetorical and ethical implications of corporate image and issue management campaigns, including their influence on culture and governance. This course addresses both adversarial and collaborative approaches with activist groups, non-governmental organizations (NGOs), and other stakeholders.
COMM $366 \quad$ Negotiation and Conflict Resolution ..... 3 Cr .This course examines the theory and process required to achieve favorable negotiation outcomes and toresolve conflicts. Significant emphasis is placed on applied learning and skill building while completingnegotiation simulations.
COMM 371COMM 372
Legal Environment of Digital Media3 Cr . This course explores the legal decisions and government regulations which form the legal environment of digital media and communication. Topics include rights and restriction on the distribution of electronic media content, rights to privacy, copyright and trademark law, content licensing, and legal issues affecting designers and hosts of online digital media. Emerging topics in digital media creation and distribution also are discussed.

COMM $380 \quad$ Television Producing and Directing 3 Cr. This course explores advanced strategies for producing/directing television studio productions. Techniques include: producing, directing, and shooting field production material to be edited and integrated into studio productions. The course incorporates producing/directing news- and entertainment-format programming, sports productions, and magazine-style productions. In addition, students gain hands-on experience producing programs for VUTV. Prerequisite: COMM 251 or consent of instructor.

## COMM 385 <br> Video Field Production 3 Cr .

This course explores techniques of producing/directing video field productions with emphasis on obtaining skills in single- and multi-camera operations, audio design, lighting, and editing. The course incorporates concepts of pre-production and post-production and editing various formats of videos (e.g., corporate, sports, educational, commercial, etc.) for distribution via broadcast, cable, Internet, and private sectors. Prerequisite: COMM 251 or instructor consent.

COMM 386 Internship 1-3 Cr.
This course includes supervised work experience with an organization related to the student's field of study in communication. Students reflect on their experiences in an online collaborative environment and make a final oral presentation about the internship. Students must complete a minimum of 45 hours of work per credit hour. Prerequisite: consent of the department internship coordinator. Open to declared departmental majors or minors only. Students must adhere to internship requirements described on the department's web site. $\mathrm{S} / \mathrm{U}$ grade only.

COMM $390 \quad$ Topics in Communication 3 Cr.
The topics examined involve a particular subject in communication or digital media and may change from semester to semester. May be repeated if topics are different. Prerequisite: Junior standing or permission of instructor.

Social Media
This course examines the history and development of social networking sites. Critiques of social networking objectives and ethical considerations form the core focus for this course. Prerequisite: Junior or Senior standing or consent of instructor.

## COMM 450

## Documentary Production

$2+2,3 \mathrm{Cr}$
This course introduces students to the process of documentary-style video production. Emphasis is placed on the production of video documentaries. Students examine the technical skills of producing, directing, writing, editing, camera, lighting, and sound. Prerequisite: COMM 198 or COMM 271, and COMM 251, or consent of instructor.

| COMM 463 | Advanced Digital Photography <br> (Also offered as ART 463.) Advanced studies in techniques, history, and aesthetics of digital photography in camera and software applications. Each student must have a working digital camera. Field trip. Prerequisite: ART 163. |
| :---: | :---: |
| COMM 471 | Cinema Production Workshop <br> Designed for a limited number of students who have demonstrated significant ability in cinema production, this course involves students in the creation of works of professional cinema art as a total process from script to screen. Prerequisite: COMM 371 or permission of instructor. |
| COMM 472 | Screenwriting <br> This course explores the relationship between the written script and the finished movie, through creative work and critical analysis. With particular emphasis on creating entertainment for an audience, students concentrate on building fictional narratives through plot and character development. Prerequisite: junior or senior standing or consent of instructor. |
| COMM 481 | Cooperative Education in Communication I <br> This course provides professional work experience with a cooperating employer. Written report required. Prerequisite: approval of the chair of the department. |
| COMM 482 | Cooperative Education in Communication II <br> Continuation of COMM 481. Prerequisite: COMM 481 and approval of the chair of the department. May be repeated beyond 483 for additional credit. |
| COMM 483 | Cooperative Education in Communication III <br> Continuation of COMM 482. Prerequisite: COMM 482 and approval of the chair of the department. May be repeated beyond 483 for additional credit. |
| COMM 490 | Topics in Communication <br> The topics examined in this course involve an in-depth study of a particular subject in a field of communication or digital media. Topics may vary from semester to semester. Prerequisite: Junior standing or permission of the instructor. |
| COMM 491 | Applied Topics in Communication $0+6,3 \mathrm{Cr} .$ <br> (Also offered as ART 491.) In this course students apply concepts to the production of student projects in one or more media. May be repeated when topics vary. Prerequisite: ART 132 or consent of instructor. |
| COMM 492 | Special Topics in Communication Practice <br> (Also offered as ART 492.) This course provides instruction in a special topic, combining theory and practice in a combination of lecture and lab classes. Instructor approval required. |
| COMM 495 | Independent Study <br> Specific topics based on interests of students and faculty. Students must submit a successful proposal to an appropriate faculty member prior to registering for this course. May be repeated if topics are different. |
| COMM 497 | Honors Work in Communication <br> For further information, see Honors Work, College of Arts and Sciences, page 63. |
| COMM 498 | Honors Candidacy in Communication <br> For further information, see Honors Work, College of Arts and Sciences, page 63. |
| COMM 499 | Capstone Senior Project <br> This course provides a collaborative, team-based communication project that integrates communication and digital media expertise. It will incorporate theory and original research from the proposal stage through its execution and evaluation. |

## Computing and Information Sciences

Learn more about the Department of Computing and Information Sciences at Valpo online.


Professor Caristi (chair); Associate Professors Glass, Yayimli; Assistant Professors Rosasco, Schmitt; Lecturers Poposki, Streuber, Wainwright, Wichlinski; Visiting Assistant Professor Cripliver.

Computing and programmable devices permeate modern culture, and most intellectual disciplines have been transformed by computational thinking. Computer science thinks about problems in terms of the logical operations machines can perform; put more informally, computer science considers how to make machines do things. Students learn modern programming languages and environments, algorithms, professional practices, and computational reasoning. This understanding is useful for becoming a computing practitioner and understanding cyber security, as well as being able to engage with computational processes in other disciplines. Careers in computer science include systems programming, applications programming, cyber security, and data management.

In addition to the major and minor listed below, entering freshmen are eligible to enroll in a 5-year program that leads to both a Bachelor of Science in Computer Science and a Master of Science in Cyber Security. For more information contact the chair of the department.

| Bachelor of Arts - Computer Science Major (Minimum 32 Cr .) |
| :--- |
| CS 157 |


| CS 157 | Algorithms and Programming | 2+3, 3 Cr . |
| :---: | :---: | :---: |
| CS 158 | Algorithms and Abstract Data Types | 2+3, 3 Cr . |
| CS 493 | Seminar in Professional Practices | 2 Cr . |
| At least 12 additional credits must be from Computer Science courses numbered 300 or above |  |  |
| Remaining credits must be from Computer Science courses numbered 200 or above |  |  |
| Additional Required Courses |  |  |


| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| :---: | :---: | :---: |
| MATH 220 | Discrete Mathematics | 3 Cr . |
| One of the following: |  |  |
| CE 202 | Statistical Applications in Civil Engineering | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| Bachelor of Science - Computer Science Major (Minimum 36 Cr ) |  |  |
| CS 157 | Algorithms and Programming | 2+3, 3 Cr . |
| CS 158 | Algorithms and Abstract Data Types | 2+3, 3 Cr . |
| CS 250 | Object Oriented Programming | 2+3, 3 Cr . |
| CS 493 | Seminar in Professional Practices | 2 Cr . |
| One course from the following options: |  |  |
| CS 358 | Software Design and Development | 3+2, 4 Cr . |
| CS 372 | Computability and Computational Complexity | 4 Cr . |
| At least 12 credits must be from Computer Science courses numbered 300 or above |  |  |
| Remaining credits must be from Computer Science courses numbered 200 or above |  |  |
| Additional Required Courses |  |  |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| MATH 220 | Discrete Mathematics | 3 Cr . |
| One of the following: |  |  |
| CE 202 | Statistical Applications in Civil Engineering | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |

## Recommended Electives

A student planning to major in Computer Science should begin taking both Computer Science and Mathematics courses in the freshman year. Students interested in the following areas of study should consider recommended electives as follows:

| Traditional Computer Science |  |  |
| :---: | :---: | :---: |
| Students planning to study Computer Science in graduate school should select electives from the following options: |  |  |
| CS 225 | Programming Languages | 3+1, 2 Cr . |
| CS 245 | C Programming | 3+1, 2 Cr . |
| CS 250 | Object Oriented Programming | 2+3, 3 Cr . |
| CS 330 | Operating Systems | $3+1,2 \mathrm{Cr}$. |
| CS 335 | Networks | 3+1, 2 Cr . |
| CS 350 | Database Management Systems | 3 Cr . |
| CS 365 | Interactive Computer Graphics | 3 Cr . |
| CS 372 | Computability and Computational Complexity | 4 Cr . |
| MATH 264 | Linear Algebra | 3 Cr . |
| Software Development |  |  |
| Students interested in becoming professional software developers should select electives from the following options: |  |  |
| CS 225 | Programming Languages | 3+1, 2 Cr. |
| CS 240 | Assembly Language Programming | 2+2, 2 Cr . |
| CS 245 | C Programming | 3+1, 2 Cr . |
| CS 250 | Object Oriented Programming | 2+3, 3 Cr . |
| CS 260 | Mobile Computing | 2+2, 2 Cr . |
| CS 330 | Operating Systems | $3+1,2 \mathrm{Cr}$. |


| CS 335 | Networks | $3+1,2 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| CS 340 | Web Programming | $3+1,2 \mathrm{Cr}$. |
| CS 350 | Database Management Systems | 3 Cr. |
| CS 358 | Software Design and Development | $3+2,4 \mathrm{Cr}$. |
| CS 365 | Interactive Computer Graphics | 3 Cr. |


| Hardware |  |  |
| :---: | :---: | :---: |
| Students interested in hardware, as well as software, should select electives from the following options: |  |  |
| CS 240 | Assembly Language Programming | 2+2, 2 Cr . |
| CS 245 | C Programming | $3+1,2 \mathrm{Cr}$. |
| CS 260 | Mobile Computing | 2+2, 2 Cr . |
| CS 320 | Digital Logic Design | 2.5+1.5, 3 Cr . |
| CS 330 | Operating Systems | $3+1,2 \mathrm{Cr}$. |
| CS 335 | Networks | $3+1,2 \mathrm{Cr}$. |
| ECE 222 | Advanced Logic Design | 2.5+1.5, 3 Cr . |
| ECE 322 | Embedded Microcontrollers | 2.5+1.5, 3 Cr . |
| ECE 424 | Computer Architecture | 3 Cr . |
| ECE 450 | Data Communication Systems | 3 Cr . |


| CS 157 | Algorithms and Programming | $2+3,3 \mathrm{Cr}$. |
| :---: | :---: | :---: |
| CS 158 | Algorithms and Abstract Data Types | $2+3,3 \mathrm{Cr}$. |
| Nine credits from Computer Science courses numbered 200 or above |  |  |
| Additional Required Course |  |  |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |

## Cooperative Education

Credit in Computer Science may be obtained for cooperative education experiences relating to Computer Science. Students must prepare a brief proposal describing the intended experience and secure a Computer Science advisor, who will decide whether the work merits Computer Science credit. For each term of Computer Science related work, students may receive 2 credits for a summer experience, or 3 credits for a full-time semester experience. No more than 3 credits may be counted toward the minimum major requirements or the Computer Science minor. (An exception may be made in the case of the Bachelor of Science degree, where up to 4 credits in Cooperative Education may be counted toward the 36 -hour single major.) If these credits are used to fulfill minimum credit hour requirements for a major or minor, at least two Computer Science experiences are required, at least one of which must be a full-time semester experience. In addition to meeting the College of Arts and Sciences 2.50 cumulative grade point average requirement, students must present a 2.50 grade point average for all required Computer Science courses in the major taken prior to participation in the Cooperative Education program. For further information, refer to Cooperative Education, College of Arts and Sciences, page 63.

## Computer Science Courses

Computers and Computation
3 Cr .
A general survey of central topics in computer science with emphasis on the scientific aspects of computation, and demonstration of how computing relates to other disciplines. Topics include algorithms and their analysis, humanmachine interfaces, artificial intelligence, software engineering, modeling of data, and serial and parallel computation. Students will perform computational experiments in a laboratory environment. May be used to fulfill the Quantitative Analysis component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

Introduction to Programming 1-2 Cr.
7 weeks. An introduction to computer problem-solving techniques using a high level language. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement exam.

| CS 156 | Fundamentals of Programming $2+2,3 \mathrm{Cr} .$ <br> A study of fundamental programming constructs, algorithms, data structures, and object orientation. An emphasis is placed on programming strategies and the application of computer algorithms to solve problems in engineering and mathematics. This course is currently listed only for the purposes of transfer credit equivalence. Students cannot receive credit for more than one of CS 156, CS 157, and ECE 251. |
| :---: | :---: |
| CS 157 | Algorithms and Programming <br> A first course in problem solving through algorithm development and analysis, with an introduction to software design. Students design algorithms for the solution of elementary problems, and writes, documents, and debugs programs for the implementation of those algorithms. Students cannot receive credit for more than one of CS 156, CS 157, and ECE 251. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment. |
| CS 158 | Algorithms and Abstract Data Types $2+3,3 \mathrm{Cr} .$ <br> A continuation of CS 157, with an emphasis on developing more skills in complex program development, data structures, and object orientation. Topics include stacks, queues and linked lists. Students design and write intermediate-sized programs. Students cannot receive credit for both CS 158 and ECE 252. Prerequisite: Grade of C or higher in one of CS 156, CS 157, or ECE 251. |
| CS 210 | E-Commerce and E-Business Technology <br> (Also offered as IDS 310.) An overview of potentials, policies, politics, possibilities, and pitfalls of electronic commerce (conducting business online) and electronic business (using information technology to manage the supply chain), including hardware and software applications required for both. Prerequisite: junior standing. |
| CS 225 | Programming Languages $3+1,2 \mathrm{Cr} .$ <br> 7 weeks. A study of programming languages, and their differences and similarities. Topics include syntax, translation, execution, design, abstraction, activation, record stack, recursion, and different programming paradigms. Prerequisite: CS 158 or ECE 252. |
| CS 240 | Assembly Language Programming <br> 7 weeks. Fundamentals of the structure of digital computers and an introduction to assembly language programming. Topics include machine instructions, data representation, addressing techniques, and program segmentation and linkage. Prerequisite: CS 158 or ECE 252 (may be taken concurrently). |
| CS 245 | C Programming $3+1,2 \mathrm{Cr} .$ <br> 7 weeks. An introduction to the C programming language and the Unix operating system. Topics include syntax, dynamic memory allocation, concurrency, synchronization, pointers and addresses, Unix system calls, common mistakes unique to C. Prerequisite: CS 157, ECE 251, or consent of the instructor. |
| CS 250 | Object Oriented Programming $2+3,3 \mathrm{Cr} .$ <br> A course on designing and building programs in an object oriented language. Students will learn the philosophy of object oriented programming and object oriented principles of software reuse and patterns. Prerequisite: CS 158 or ECE 252. |
| CS 260 | Mobile Computing $\text { 2+2, } 2 \mathrm{Cr} .$ <br> 7 weeks. Experience creating applications in a mobile device environment such as Android, IOS, or Windows Mobile. Topics include the model, view, controller paradigm, user interaction, hardware device interaction, and common patterns of application behavior. Prerequisite: CS 157, ECE 251, or consent of the instructor. |
| CS 285 | Practicum in Computer Science <br> Intensive professional experience and/or technical training in a computing related field. A written report is required. S/U grade only. Prerequisites: consent of chair of the department. |
| CS 290 | Topics in Computer Science <br> Topics will vary according to faculty and student interest. This course may be repeated for credit, provided that topics are different. Prerequisite: consent of the instructor. |
| CS 320 | Digital Logic Design $2.5+1.5,3 \mathrm{Cr}$ <br> (Also offered as ECE 221.) An introduction to digital logic concepts, including the analysis and design of combinational and sequential digital circuits. |

An introduction to computer simulation of mathematical models of discrete and continuous phenomena. Some standard simulations are examined, others implemented using a simulation language. Prerequisites: MATH 131, either CS 157 or ECE 251, and one of STAT 140, 240, IDS 205, or CE 202.

Web Programming
3+1, 2 Cr .
7 weeks. An introduction to web technology, covering a number of specific systems, such as html, php, SQL, javaScript, and XML. A laboratory component provides hands-on experience. Prerequisite: CS 157 or ECE 251 or consent of the instructor.

Artificial Intelligence
$3+1,2 \mathrm{Cr}$.
7 weeks. An introduction to the goals, concepts, and algorithms of artificial intelligence, including both modern techniques and techniques of historical interest. Topics include symbolic and numerical representations, as well as the algorithms for machine reasoning and machine learning. Lab topics include use and implementation of these techniques. Prerequisites: CS 158 or ECE 252, and one of MATH 131, STAT 140, STAT 240, PSY 201, IDS 205, or CE 202.

Database Management Systems 3 Cr .
A study of relational and object-oriented database management systems, data modeling, and database design. Both SQL and Non-SQL databases will be studied. Prerequisite: CS 157 or ECE 251.

Software Design and Development $3+2,4 \mathrm{Cr}$.
The specification, design, implementation, documentation, testing, and management of software systems. Intensive work on a group project, directed by the instructor, to design and develop a usable software system. Students will also learn fundamentals of graphics and graphical user interfaces. Prerequisite: CS 250.
Interactive Computer Graphics
3 Cr .
A study of the fundamentals of interactive computer graphics systems and software. Topics include the representation and algorithms for manipulating graphics, such as geometric transformations, projections, lighting, textures, and rasterizing. Students will use graphics programming paradigms, such as graphics pipelines and ray tracing. Prerequisites: CS 158 or ECE 252, and MATH 131.

CS $372 \quad$ Computability and Computational Complexity $\quad 4 \mathrm{Cr}$. Emphasis on the limits to the power of computation and a systematic analysis of the algorithms that harness it.
Topics include the Chomsky hierarchy, several automata and language models, and demonstrations of uncomputable problems, and various design strategies. Prerequisites: either CS 158 or ECE 252, either MATH 220 or MATH 131, and at least 10 credits in CS.

## CS 373 Computational Linear Algebra <br> $2+2,3 \mathrm{Cr}$.

(Also offered as DATA 373 and MATH 373.) A survey of computational applications of linear algebra for solving science and engineering problems. Topics include linear systems in both equation and matrix form, row operations, inverses and determinants, eigenvalues, Gaussian elimination, matrix decomposition (including singular value and QR decompositions), sparse vs. dense matrices, and approximation. Topics are explored through applications to large data sets, with programming in both Python and MATLAB environments. Other advanced topics related to data mining may be covered. Prerequisites: CS 157 or DATA 151 and MATH 260 or MATH 264.

The student defines a suitable computer application, develops the necessary software using appropriate techniques and prepares documentation for the use and support of the completed system. An oral report is required. Prerequisites: CS 358, senior standing, and a proposal approved by the chair of the department.

Advanced Topics in Computer Science
1-3 Cr.
An advanced course for computer science majors. Topics will vary according to faculty and student interest. This course is only offered when there is sufficient demand. Prerequisite: consent of the instructor.

CS 492
Research in Computer Science 0-3 Cr.
Students undertake a research problem in Computer Science under the direction of a faculty member. Written and oral reports are required. S/U grade only. Prerequisite: consent of the Instructor or chair of the department.
Seminar in Professional Practices
2 Cr .
Students and faculty discuss professionalism and ethical responsibilities in software development and humancomputer interaction, and explore laws, risks and liabilities, codes of ethics, privacy, international and gender related issues, philosophical frameworks, and economic implications. Students will learn and develop oral presentation and research skills. Prerequisites: junior standing and at least 12 credits of CS courses numbered 200 or above.

Independent Study in Computer Science
1-3 Cr.
The student studies an advanced topic in Computer Science under the direction of a faculty member. Written work is required. Prerequisite: consent of the chair of the department.

CS 497 Honors Work in Computer Science 3 Cr .
See Honors Work, page 63.
CS 498 Honors Candidacy in Computer Science
3 Cr .
See Honors Work, page 63.

## Data Science

Learn more about Data Science at Valpo online.

## Assistant Professor Karl Schmitt (director).

## Administration

This program is administered by the Department of Mathematics and Statistics in consultation with the Department of Computing and Information Sciences.

Students who complete the Data Science major will have fulfilled the major field requirements for the Bachelor of Science degree.

Data Science is considered an interdisciplinary program. See page 369 for more information.

## Objectives

A data scientist analyzes complex systems and solves real world problems through the analysis of data, and in particular, very large sets of data. Many scientific disciplines, our economy, and even our providers of streaming entertainment increasingly rely on data. According to the Data Science Association, components of the field of Data Science include "predictive/ prescriptive analytics, algorithm design and execution, applied machine learning, statistical modeling, and data visualization."

Because of the interdisciplinary nature of Data Science, a student wishing to obtain a Bachelor of Science in Data Science must take courses in Data Science and from the partner disciplines of Statistics, Mathematics, and Computer Science. Additionally, students should explore an area of application through selection of one or more courses from an appropriate field, as described below. Students are strongly encouraged to take a minor or a second major in their applied field of interest.

| Statistics Courses |  | 9-10 Cr. |
| :---: | :---: | :---: |
| One course from the following options |  |  |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr. |
| IDS 205 | Business Statistics | 3 Cr . |
| CE 202 | Statistical Applications in Civil Engineering | 3 Cr . |
|  |  |  |
| Note: The preferred statistics course is STAT 240. |  |  |
| One course from the following options: |  |  |
| STAT/IDS 340 | Statistics for Decision Making | 3 Cr . |
| ECON 325 | Econometrics | 3 Cr . |
| One course from the following options: |  |  |
| STAT 343 | Time Series Analysis | 3 Cr . |
| STAT 344 | Stochastic Processes | 3 Cr . |
| STAT 441 | Probability | 4 Cr . |
| Mathematics Courses |  | $8-10 \mathrm{Cr}$. |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| MATH 220 | Discrete Mathematics | 3 Cr . |
| One course from the following options: |  |  |
| MATH 260 | Linear Systems and Matrices | 1 Cr. |
| MATH 264 | Linear Algebra | 3 Cr . |
| Computer Science Courses |  | 11-12 Cr. |
| CS 157 | Algorithms and Programming | $2+3,3 \mathrm{Cr}$. |
| CS 158 | Algorithms and Abstract Data Types | $2+3,3 \mathrm{Cr}$. |
| CS 350 | Database Management Systems | $2+3,3 \mathrm{Cr}$. |

One course from the following options:

| CS 225 | Programming Languages | 3+1, 2 Cr . |
| :---: | :---: | :---: |
| CS 325 | Simulation and Modeling | 3 Cr . |
| CS 345 | Artificial Intelligence | 3+1, 2 Cr . |
| Data Science Courses |  | 11 Cr . |
| DATA 151 | Introduction to Data Science | 2+3, 3 Cr . |
| DATA 299 | Data Science Colloquium I | 0 Cr . |
| DATA 399 | Data Science Colloquium II | 1 Cr . |
| DATA 433 | Data Mining and Applications | 2+3, 3 Cr . |
| DATA 499 | Data Science Capstone | 1 Cr . |
| One course from the following options: |  |  |
| DATA 373 | Computational Linear Algebra | 2+2, 3 Cr . |
| DATA 375 | Scientific Visualization | 3 Cr . |
| DATA 490 | Advanced Topics in Data Science | 3 Cr . |
| ECON 473 | Applied Data Science | 3 Cr . |
| Application Area |  | 1-3 Cr. |
| One course from the following options: |  |  |
| BIO/MATH 321 | Mathematical Models of Infectious Diseases | 3 Cr . |
| GEO/MET 460 | Data Analysis | 3 Cr . |
| ECON 473 | Applied Data Science (if not taken above) | 3 Cr . |
| PHYS 246 | Data Reduction and Error Analysis | 1 Cr . |
| POLS 210 | Research Methods in Political Science | 3 Cr . |
| PSY 370 | Laboratory in Experimental Design and Analysis | 3 Cr . |
| Additional courses may be approved by the program director. |  |  |

## Data Science Courses

DATA 151 Introduction to Data Science 2+3, 3 Cr .
Introduction to the use of computer based tools for the analysis of large data sets for the purpose of knowledge discovery. Students will learn to understand the Data Science process and the difference between deductive hypothesis-driven and inductive data-driven modelling. Students will have hands-on experience with appropriate on-line analytical processing and data mining software platforms, and will complete a project using real data. Pre-requisite: MATH 115 placement of Calculus on the math placement assessment, or one of STAT 140, STAT 240, IDS 205, or CE 202.

DATA 299

DATA 375

Data Science Colloquium I
0 Cr .
Students read current media or journal articles involving data science, and present written and/or oral analyses. Students evaluate senior presentations given by students in DATA 499, and provide written feedback on project proposals from DATA 399. Guest speakers may be arranged to present on a variety of topics. Meets jointly with DATA 399 and DATA 499. Usually offered every spring semester. Prerequisite: DATA 151.

Computational Linear Algebra
$2+2,3 \mathrm{Cr}$. (Also offered as MATH 373 or CS 373.) A survey of computational applications of linear algebra for solving science and engineering problems. Topics include linear systems in both equation and matrix form, row operations, inverses and determinants, eigenvalues, Gaussian elimination, matrix decomposition (including singular value and QR decompositions), sparse vs. dense matrices, and approximation. Topics are explored through applications to large data sets, with programming in both Python and MATLAB environments. Other advanced topics related to data mining may be covered. Prerequisites: One of CS 157 or DATA 151, one of MATH 260 or MATH 264.

Scientific Visualization
Students are introduced to a variety of techniques for visualizing scientific data, with an emphasis on representing large datasets in informative ways. Data from a variety of disciplines is studied and taxonomies for viewing this data are developed. The interfaces used to manipulate views of such datasets in a virtual environment are also studied. Prerequisites: DATA 151 and CS 158.

| DATA 381 | Cooperative Education in Data Science $\quad$ 0.5-3 Cr. |
| :---: | :---: |
|  | The application of data science concepts in a professional setting. Grade based on employer's evaluation and student's written and oral reports. S/U grade only. May be repeated for additional credit. Prerequisite: Data Science major and approval of the director of the Data Science program. |
| DATA 386 | Internship in Data Science 1-3 Cr. |
|  | Opportunities for students to have direct, supervised experience in public agencies or private industry, such as scientific, technical, or financial firms. S/U grade. Prerequisites: Data Science major and approval of the director of the Data Science program. |
| DATA 399 | Data Science Colloquium II 1 Cr. |
|  | Students will present an ethical case study on an analytical or statistical data topic. Students will propose and design a capstone project integrating their mathematical, statistical, computational and applied knowledge. |
|  | Guest speakers may be arranged to present on a variety of topics. Meets jointly with DATA 299 and DATA 499. Usually offered every spring semester. Prerequisite: DATA 299 and junior standing. |
| DATA 433 | Data Mining and Applications 2+2,3 Cr. |
|  | Data mining is a broad area that integrates techniques from several fields, including machine learning, statistics, pattern recognition, artificial intelligence, and database systems, for the analysis of large volumes of data. This course gives a wide exposition of these techniques and their software tools. Prerequisite: DATA 151 or CS 157 and one of STAT 140, STAT 240, IDS 205, PSY 201, or CE 202. Students may not receive credit for both DATA 433 and BUS 440. |
| DATA 490/590 | Advanced Topics in Data Science 3 Cr. |
|  | An intensive study of selected topics, methods, techniques, and problems in Data Science. Only offered when there is sufficient demand. Prerequisites will depend on the content. |
| DATA 495 | Independent Study in Data Science 1-3 Cr. |
|  | Students study advanced topics in data science under the supervision of a faculty member. Written work is required. Prerequisite: consent of the chair of the department. |
| DATA 496 | Research in Data Science 0-3 Cr. |
|  | Students undertake a research problem in data science under the direction of a faculty member. Written and oral reports are required. S/U grade only. Prerequisite: Consent of the instructor or chair of the department. |
| DATA 497 | Honors Work in Data Science 3 Cr. |
|  | See Honors Work, page 63. |
| DATA 498 | Honors Candidacy in Data Science 3 Cr. |
|  | See Honors Work, page 63. |
| DATA 499 | Data Science Capstone 1 Cr. |
|  | Students will undertake a capstone project integrating their applied domain knowledge and general data-science coursework. The project will culminate in a final paper and presentation. Guest speakers may be arranged to present on a variety of topics. Meets jointly with DATA 299 and DATA 399. Usually offered every spring semester. Prerequisite: DATA 399. |

## Economics

Learn more about the Department of Economics at Valpo online.

## Associate Professors Devaraj, Raman, Saros (chair); Assistant Professors Beck, Gundersen, Hao.

Economics provides a logical ordered way of looking at problems, issues, and policies regarding the production, distribution, and consumption of goods and services. It draws upon other social sciences and mathematics to confront a wide range of topics from environmental abuse to economic growth, to business regulation and other governmental interactions with the commercial world. As economics in general deals with choice and decision making, it is of great value on both a personal and a professional level.

Economics majors have a wide range of career choices, including government or business economist, banking economist, investment analyst, trade association economist, and others.

Students who distinguish themselves by high scholarship may be elected to Omicron Delta Epsilon, an international economics honor society.

Bachelor of Arts - General Economics Major (Minimum 27 Cr.)

| ECON 221 | Principles of Microeconomics | 3 Cr . |
| :---: | :---: | :---: |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| ECON 321 | Intermediate Microeconomic Theory | 3 Cr . |
| ECON 322 | Intermediate Macroeconomic Theory | 3 Cr . |
| ECON 325 | Econometrics | 3 Cr . |
| Additional Requirements: |  |  |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |

Note: A minimum of two of the four economics electives must be at the $\mathbf{3 0 0}$
level or higher.

Bachelor of Arts - Economics and Computer Analysis Major (Minimum 27 Cr.)
ECON 221
ECON 222
ECON 321
ECON 322
ECON 325 3 Cr.

Additional Requirements:

| CS 157 | Algorithms and Programming | $2+3,3 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| CS 325 | Simulation and Modeling | 3 Cr. |

Mathematics Minor including the following courses:
One course from the following options:
MATH 124 Finite Mathematics 4 Cr .
MATH 131 Calculus I 3+2, 4 Cr .
One course from the following options:
MATH 122 Applied Calculus 4 Cr .
MATH 132 Calculus II $3+2,4 \mathrm{Cr}$.
STAT 240 Statistical Analysis 3 Cr .

MATH $320 \quad$ Dynamical Systems (or an approved alternative) 3 Cr.
Note: A minimum of two of the four economics electives must be at the $\mathbf{3 0 0}$
level or higher.

## General Economics Minor (Minimum 18 Cr.)

| ECON 221 | Principles of Microeconomics | 3 Cr . |
| :---: | :---: | :---: |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| One course from the following options: |  |  |
| ECON 321 | Intermediate Microeconomic Theory | 3 Cr . |
| ECON 322 | Intermediate Macroeconomic Theory | 3 Cr . |
| ECON 325 | Econometrics | 3 Cr . |
| One additional course at the $\mathbf{3 0 0}$ level or above |  |  |
| Additional Requirements: |  |  |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |

ECON 136 and ECON 486 will not count towards fulfilling the minimum major or minor requirements.

## Degree

Completion of the degree requirements of the College of Arts and Sciences with a major in Economics leads to the Bachelor of Arts degree.

## Credit by Examination

Credit for ECON 221 and 222 may be earned through the College Level Examination Program subject examination in Introductory Economics.

## Approval of Schedules

All students taking a major or minor in economics must have their schedules approved at the beginning of each semester.

## Economics Courses

## ECON 136 <br> The Economics of Health, Education, and Welfare <br> 3 Cr .

ECON 210
This course is an introduction to the economics of public and private provision of health, education, and social services in urban and developing economies. May be used to fulfill the Cultural Diversity or the Social Science course component of the General Education Requirements. ECON 136 will not count towards fulfilling the minimum major or minor requirements.

## Environmental Economics and Policy

3 Cr .
An introductory study of the relationship between environmental quality and economic behavior, with an emphasis on the principles of demand, costs, and economic efficiency. Current developments in the United States and world environmental policies will be analyzed.

ECON 221

ECON 222

ECON 233

ECON 236

ECON 290

Principles of Microeconomics
3 Cr .
An introductory study of the central functions and problems of an economic system with emphasis on the determinants of consumer demand, producer supply, and their interactions in the marketplace.

Principles of Macroeconomics
3 Cr .
An introduction to macroeconomic analysis with emphasis on national income, consumer spending, investment, government, and monetary aspects.

The Economics of Race and Gender
3 Cr . Investigates the employment gaps and earnings gaps that exist between women and men, and between various racial and ethnic groups in America. Economic analysis of discrimination and its consequences for individuals and families. May be used to fulfill the Cultural Diversity or the Social Science course component of the General Education Requirements.
Contending Economic Theories
3 Cr .
A comparative analysis of political theories and the economic systems that derive from those theories. The course focuses on those ideological assumptions that result in capitalism, socialism, anarchism, etc. as the solution to economic problems. Prerequisite: ECON 221 or ECON 222.

## Topics in Economics

3 Cr .
A course in which a special topic in economics is given intensive study. Topics, descriptions, and prerequisites will be announced in advance. May be repeated for credit if topics are different. Prerequisites vary depending on the topic chosen.

Intermediate Microeconomic Theory
3 Cr.
A study of the theoretical concepts and analytical techniques which economists employ to interpret the process of resource allocation under various systems of economic organization. Prerequisite: ECON 221 and MATH 131.

Intermediate Macroeconomic Theory
3 Cr .
A critical examination of theories of national income determination and of techniques for measuring and analyzing aggregate economic activity. Prerequisite: ECON 222 and MATH 131.

Econometrics
3 Cr .
The application of mathematical and statistical techniques to the analysis of economic issues. Development of simple and multiple regression as tools of analysis. Use of computer facilities and statistical programs to apply the tools to current economic data. Prerequisites: ECON 221, ECON 222, MATH 131 and one of the following: STAT 140, STAT 240, PSY 201, or IDS 205.

ECON 326
International Economics
3 Cr.
A study of the basis for the gains from international trade, including the effects of growth and development on a nation's welfare. Attention is also given to the effects of tariffs and other restrictions to trade. Balance of payments accounting, foreign exchange markets, and international monetary institutions are covered during the last part of the course. Prerequisites: ECON 221 and ECON 222.

## ECON 336/536 Economics of Developing Nations

3 Cr .
An analysis of economic variables, both theoretical and institutional, which characterize developing nations. Emphasis is placed on cyclical poverty, allocation of resources, and policy planning. Prerequisite: ECON 221 or ECON 222, and junior standing. May be used to fulfill the Cultural Diversity or the Social Science course component of the General Education Requirements.

## ECON 337/537 Public Finance

3 Cr .
An analysis of the role of the government sector in a market economy. Causes of market failure, the efficient provision of public goods, and the effects of taxation are considered as they relate to economic activity. Prerequisite: ECON 221 or ECON 222.

ECON 339/539 Money and Banking 3 Cr.
A study of the institutions, principles, and problems of money and banking in the United States. Special attention is given to the basic elements of monetary theory and policies. Prerequisite: ECON 222.

ECON 370 The History of Economic Thought 3 Cr.
Economic thought in its historical development from the Mercantilists to the present day. Prerequisite: ECON 221 or ECON 222.

ECON 390/590 Topics in Economics
3 Cr .
A course in which a special topic in economics is given intensive study. Topics, descriptions, and prerequisites will be announced in advance. May be repeated for credit if topics are different. Prerequisite: ECON 221 and ECON 222.

## ECON 473/573

Applied Data Science
3 Cr .
A focus on data management, business analytics, predictive analytics, and econometric modeling. Logistic regression, instrumental variables estimation, and other estimation techniques are discussed. Prerequisite: ECON 325 or STAT 340, ECON 221, and ECON 222.

ECON 486 Internship in Economics 1-3 Cr.
Direct, supervised experience in a cooperating business, government agency, or service agency requiring the use of a student's economics knowledge. Some internships are in conjunction with off-campus programs such as the Washington Semester Program. Prerequisite: consent of the chair of the department. ECON 486 will not count towards fulfilling the minimum major or minor requirements.

ECON 493/593 Seminar in Applied Statistics
3 Cr .
(Also offered as STAT 493.) An intensive study of selected topics, methods, techniques, and problems in applied statistics. Prerequisites: IDS 340, ECON 325, or STAT 340.

ECON 495

| ECON 497 | Honors Work in Economics <br> See Honors Work, page 63. | 3 Cr. |
| :--- | :--- | :--- |
| ECON 498 | Honors Candidacy in Economics <br> See Honors Work, page 63. | 3 Cr. |
|  |  |  |

## Education

Learn more about the Department of Education at Valpo online.

Professor Westrick; Associate Professors Brauer, Dudzinski, Gary (chair), Grabarek; Assistant Professors DeMik, Drapeau, Fantuzzo, Golomb, Magennis, Nakazawa; Lecturer Friesen-Carper, Johnston, Yelton.

The Education Department at Valparaiso University prepares teachers for Lutheran, public, and private schools. Each program of study leads to Indiana licensure for elementary, middle school, or high school teaching.

## Accreditation

Valparaiso University is accredited by the Indiana Department of Education as a teacher education institution to meet Indiana licensure requirements, and by the National Council for Accreditation of Teacher Education (NCATE) at both undergraduate and graduate levels to prepare elementary, middle school, and high school teachers; and school psychologists (graduate level). Valparaiso University is also a member of the American Association of Colleges for Teacher Education (AACTE) and the Indiana Association of Colleges for Teacher Education (IACTE).

## Licensure

Students must meet Indiana state teacher licensure and education program requirements. Please note that the requirements for licensure in Indiana are subject to change by the state and may affect education student requirements at any time.

The mere completion of the prescribed courses outlined by the Education Department does not guarantee that the student will be recommended for licensure or a teaching position.

For a listing of all programs offered, see page 59 or the Indiana Department of Education website www.doe.in.gov/student-services/licensing.

All undergraduate Education majors (Elementary and Secondary) are required to purchase access to Taskstream as part of the application process to the Teacher Education program, usually done in the ED 206 course.

## Elementary Education

Students who seek licensure as an elementary teacher must complete the requirements of the Bachelor of Science in Education degree with a major in Elementary Education and either a Rules for Educator Preparation and Accountability (REPA) content area minor or a REPA content area major approved for certification by the Indiana Department of Education (IDOE).

## Secondary Education

Students seeking secondary licensure declare a complementary major in Secondary Education and an academic major in another department. The secondary education complementary major must be declared in the Office of the Registrar before admission to Teacher Education. The academic teaching major in which students are licensed may include courses that do not apply to the academic major. The requirements of an academic major and a teaching major may be different. A teacher education advisor is assigned to every secondary education student. See the "Academic Advising" section on page 44.

Note: A student may not major in both Elementary Education and Secondary Education. Students seeking both elementary and secondary licensure should consult with their advisor and the licensure director to select the appropriate courses that should be added to their declared major to achieve this goal.

## Baccalaureate/Masters (4+1) Early Entry Option in Education

The Early Entry program in Education is an option for undergraduate students at Valparaiso University in any major who are willing to commit to the M.Ed. program upon completion of the bachelor's degree. This program offers several benefits to Valparaiso University undergraduates, including an early admission decision for graduate study and the opportunity to save credits and tuition by allowing graduate course work during the student's senior year.

Students interested in applying to the program should have completed the necessary undergraduate hours, as specified by their areas of major and minor, to graduate at the completion of their senior year. They must also show evidence of a cumulative grade point average of 3.30, and have earned at least a B in coursework in School and Society (ED 206) and Educational Psychology (ED 304) by the fall semester of the junior year.

Students meeting these criteria should then:

1. Request that their undergraduate major advisor complete a form (included in the application packet) verifying that basic requirements for admission into the Early Entry program have been met. The student is also required to attach evidence of a recent degree audit.

## Education

2. Submit the Master of Education Early Entry application to the Graduate School Office no later than March 1st of the junior year.

Once applications are received for the Early Entry program, the Department of Education's Graduate Admissions Committee will review candidates and select a limited number for admission. Admitted students would then have to commit to completing at least 6 credits of courses in the M.Ed. program during the senior year after meeting with the academic advisor for the program. Students are responsible for informing their instructor when course work is taken as part of the Early Entry program. Students enrolled in the Early Entry program are permitted to take the following courses, which could then be applied to their graduate study in the Masters in Education program:

| ED 550 | Faith, Ethics, and Teaching | 3 Cr. |
| :--- | :--- | :--- |
| SPED 540 | Learning Exceptionalities | 3 Cr. |
|  | Education Methods Courses | 3 Cr. |

Formal admission into the Masters in Education program requires that students submit a current copy of their academic transcript to the Graduate School Office by March 1st of the senior year and complete a final admission request for entry into the Masters of Education program.

## Elementary Education (Grades K-6)

Completion of the degree requirements with a major in Elementary Education leads to the Bachelor of Science in Education degree. The General Education Requirements for this degree are found on page 56. The education and other requirements are listed below.

| Education Requirements |  | 55 Cr . |
| :---: | :---: | :---: |
| ED 206 | School and Society | 3 Cr . |
| ED 304 | Educational Psychology | 3+0, 3 Cr . |
| ED 310 | Foundations in Early and Emergent Literacy | 3 Cr . |
| ED 323 | Methods of Science Education | 4 Cr . |
| ED 324 | Methods of Teaching Mathematics in the Elementary School | 4 Cr . |
| ED 327 | Methods of Teaching Social Studies in the Elementary School | 4 Cr . |
| ED 329 | Literacy in the Elementary School | 4 Cr . |
| ED 350 | Seminar: Introduction to the Profession of Education | 0 Cr . |
| ED 357 | Designing Curriculum, Assessment, and Learning Plans | 3 Cr . |
| ED 367 | English Language Learning Methods | 3 Cr . |
| ED 451 | Seminar: Efficacy in Professional Practice | 1 Cr . |
| ED 452 | Seminar: Praxis Reflection | 1 Cr . |
| ED 465 | Literacy in Socio-Cultural Contexts | 4 Cr . |
| ED 470 | Diversity, Equity, and Education | 3 Cr . |
| SPED 440 | Learning Exceptionalities | 3 Cr . |
| One course from the following options: |  |  |
| ED 439 | Supervised Teaching in the Elementary Grades | 12 Cr. |
| SPED 449 | Supervised Teaching in General and Special Education | 12 Cr . |
| Other Course Requirements |  | 15 Cr . |
| COMM 243 | Public Communication | 3 Cr . |
| Advanced Composition (one course from the following options) |  |  |
| ENGL 210 | Introduction to Business and Professional Writing | 3 Cr . |
| ENGL 321 | Intermediate Composition | 3 Cr . |
| ENGL 380 | Topics in Writing | 3 Cr . |
| ENGL 323 | Short Story Writing | 3 Cr . |
| MATH 211 | Laboratory in Elementary Mathematics I | 0 Cr . |
| MATH 212 | Laboratory in Elementary Mathematics II | 1 Cr . |
| MATH 213 | Mathematics for Elementary Teachers I | 4 Cr . |
| MATH 214 | Mathematics for Elementary Teachers II | 4 Cr . |

## Elementary Concentrations

Elementary Education students are required to complete two areas of concentration in addition to the requirements for the major. The required concentration, Multicultural Literacy, is embedded in required literacy courses. The second concentration should be fulfilled with the completion of a minor or major approved for certification by the Indiana Department of Education (IDOE). Minors or majors in academic content areas other than those listed below must be appropriate for future elementary
teachers and must be approved by the education department chairperson or the director of licensure prior to beginning courses in those minors or majors.

1. Concentration 1: Multicultural Literacy (included as part of required courses)
2. Concentration 2: Select one of the following minors or majors:

Art
Biology
Chemistry
Chinese
Data Science
English
Environmental Science
French
German
Geography
History
Mathematics
Music
Physical Education
Physics
Political Science and International Relations
Psychology
Sociology and Criminology
Spanish

## Education Minor (Minimum 18 Cr.)

| Required Courses: |  | 6 Cr . |
| :---: | :---: | :---: |
| ED 206 | School and Society | 3 Cr . |
| ED 304 | Educational Psychology | 3+0, 3 Cr . |
| Twelve credits from the following options: |  | 12 Cr . |
| ED 310 | Foundations in Emergent and Early Literacy | 3 Cr . |
| ED 323 | Methods of Teaching Science | 3 Cr . |
| ED 324 | Methods of Teaching Mathematics in the Elementary School | 3 Cr . |
| ED 327 | Methods of Teaching Social Studies in the Elementary School | 3 Cr . |
| ED 357 | Designing Curriculum, Assessment, and Learning Plans | 3 Cr . |
| ED 360 | Literacies Across the Content Areas | 3 Cr . |
| ED 367 | English Language Learning Methods | 3 Cr . |
| ED 407 | Media Literacy and Critical Praxis | 3 Cr . |
| ED 453 | Spiritual Practices, Teaching, and the Good Life | 3 Cr . |
| ED 454 | Faith, Ethics, and Teaching | 3 Cr . |
| ED 470 | Diversity, Equity, and Education | 3 Cr . |
| SPED 440 | Learning Exceptionalities | 3 Cr . |

The Education Minor does NOT meet the requirements necessary for licensure.

In addition to the above requirements, the student must present sufficient electives to earn the 124 credit hours required for graduation.

## Four-Year Planning for Elementary Education

Students should organize their four-year plans around the following blocks, sequence of professional education courses, and checkpoints outlined below. Additional requirements in education and general education can be planned in other semesters and as additional courses in some of these blocks.

| Block 1: Inquiry |  | 9 Cr . |
| :---: | :---: | :---: |
| ED 206 | School and Society | 3 Cr . |
| ED 304 | Educational Psychology | 3+0, 3 Cr . |
| ED 310 | Foundations in Early and Emergent Literacy | 3 Cr . |
| ED 350 | Seminar: Introduction to the Profession of Education | 0 Cr . |
| Block 2: Efficacy |  | 19 Cr . |
| ED 323 | Methods of Science Education | 4 Cr . |
| ED 324 | Methods of Teaching Mathematics in the Elementary School | 4 Cr . |
| ED 327 | Methods of Teaching Social Studies in the Elementary School | 4 Cr . |
| ED 329 | Literacy in the Elementary School | 4 Cr . |
| ED 357 | Designing Curriculum, Assessment, and Learning Plans | 3 Cr . |
| Block 3: Equity |  | 13 Cr . |
| ED 367 | English Language Learning Methods | 3 Cr . |
| ED 465 | Literacy in Socio-Cultural Contexts | 4 Cr . |
| ED 470 | Diversity, Equity, and Education | 3 Cr . |
| SPED 440 | Learning Exceptionalities | 3 Cr . |


| Block 4: Professional Praxis | $\mathbf{1 4 ~ C r}$. |
| :--- | ---: |
| ED 451 | Seminar: Efficacy in Professional Practice |
| ED 452 | Seminar: Praxis Reflection |
| One course from the following options: | 1 Cr. |
| ED 439 | Supervised Teaching in Elementary Grades |
| SPED 449 | Supervised Teaching in General and Special Education |

Elementary education students who would like to attend a study abroad semester should plan their course of study in close collaboration with the Education Department advisor from the beginning of their first semester at Valparaiso University. No additional coursework is permitted during Block 4 due to the rigor of the curriculum requirements.

## Secondary Education (Grades 5-12)

Completion of the degree requirements with a major in Secondary Education leads to the Bachelor of Arts or Bachelor of Science degree, depending on the teaching major. For the General Education Requirements for these degrees, see pages $49-55$. The education and other requirements are listed below.

| Education Requirements |  | 41 Cr. |
| :---: | :---: | :---: |
| ED 206 | School and Society | 3 Cr . |
| ED 304 | Educational Psychology | 3+0, 3 Cr . |
| ED 350 | Seminar: Introduction to the Profession of Education | 0 Cr . |
| ED 357 | Designing Curriculum, Assessment and Learning Plans | 3 Cr . |
| ED 360 | Literacies Across the Content Areas | 3 Cr . |
| ED 367 | English Language Learning Methods | 3 Cr . |
| ED 407 | Media Literacy and Critical Praxis | 3 Cr . |
| ED 451 | Seminar: Efficacy in Professional Practice | 1 Cr . |
| ED 452 | Seminar: Praxis Reflection | 1 Cr . |
| ED 470 | Diversity, Equity, and Education | 3 Cr . |
| SPED 440 | Learning Exceptionalities | 3 Cr . |
| One course from the following options: |  |  |
| ED 459 | Supervised Teaching in the Secondary School Subjects | 12 Cr. |
| SPED 449 | Supervised Teaching in General and Special Education | 12 Cr . |
| One course from the following options*: |  |  |
| ED 381 | Methods of Teaching English In Secondary Schools | 3 Cr . |
| ED 382 | Methods of Teaching Mathematics In Secondary Schools | 3 Cr . |
| ED 383 | Methods of Teaching Social Studies In Secondary Schools | 3 Cr . |
| ED 384 | Methods of Teaching Science In Secondary Schools | 3 Cr . |
| ED 386 | Educational Art: Methods and Materials Workshop | 3 Cr . |
| ED 387 | Methods of Teaching Foreign Language In Secondary Schools | 3 Cr . |
| ED 388 | Methods of Teaching Art In Secondary Schools | 3 Cr . |
| KIN 489 | Methods of Teaching Secondary Physical Education | 3 Cr . |
| MUS 489 | School Music II | 3 Cr . |
| Other Requirements |  | 3 Cr . |
| COMM 243 | Public Communication | 3 Cr . |

*Art education majors must take both ED 386 and ED 388
In addition to the above requirements, the student must present sufficient credits to earn the 124 credits required for graduation.

## Additional Teaching Content Areas

Students who are interested in specific information about the requirements for additional content areas should contact the Education Department licensure officer.

## Content Area Major

A content area major is required of all high school teacher candidates. A content area major for teachers may have requirements beyond those of majors not preparing to teach. Students seeking to teach in a high school must major in one of the content areas listed on page 59 and approved for licensure.

## Four-Year Planning for Secondary Education

Secondary Education majors should regularly consult both their education and academic major advisors prior to registration each semester. Students should organize their four-year plan, including additional requirements in education and general education, around the following blocks, sequence of professional education courses, and checkpoints outlined below. No additional coursework is permitted during Block 4 due to rigor of the curriculum requirements.

| Block 1: Inquiry |  | 6 Cr . |
| :---: | :---: | :---: |
| ED 206 | School and Society | 3 Cr . |
| ED 304 | Educational Psychology | $3+0,3 \mathrm{Cr}$. |
| ED 350 | Seminar: Introduction to the Profession of Education | 0 Cr . |
| Block 2: Efficacy |  | 9 Cr . |
| ED 357 | Designing Curriculum, Assessment, and Learning Plans | 3 Cr . |
| ED 360 | Literacies Across the Content Areas | 3 Cr . |
|  | Education Methods Course | 3 Cr . |
| Block 3: Equity |  | 12 Cr . |
| ED 367 | English Language Learning Methods | 3 Cr . |
| ED 407 | Media Literacy and Critical Praxis | 3 Cr . |
| ED 470 | Diversity, Equity, and Education | 3 Cr . |
| SPED 440 | Learning Exceptionalities | 3 Cr . |
| Block 4: Professional Praxis |  | 14 Cr . |
| ED 451 | Seminar: Efficacy in Professional Practice | 1 Cr . |
| ED 452 | Seminar: Praxis Reflection | 1 Cr . |
| One course from the following options: |  |  |
| ED 459 | Supervised Teaching in Secondary School | 12 Cr. |
| SPED 449 | Supervised Teaching in General and Special Education | 12 Cr . |

## Education Minor (Minimum 18 Cr.)

| Required Courses: |  | 6 Cr . |
| :---: | :---: | :---: |
| ED 206 | School and Society | 3 Cr . |
| ED 304 | Educational Psychology | 3+0, 3 Cr . |
| Twelve credits from the following options: |  | 12 Cr . |
| ED 310 | Foundations in Emergent and Early Literacy | 3 Cr . |
| ED 323 | Methods of Teaching Science | 3 Cr . |
| ED 324 | Methods of Teaching Mathematics in the Elementary School | 3 Cr . |
| ED 327 | Methods of Teaching Social Studies in the Elementary School | 3 Cr . |
| ED 357 | Designing Curriculum, Assessment, and Learning Plans | 3 Cr . |
| ED 360 | Literacies Across the Content Areas | 3 Cr . |
| ED 367 | English Language Learning Methods | 3 Cr . |
| ED 407 | Media Literacy and Critical Praxis | 3 Cr . |
| ED 453 | Spiritual Practices, Teaching, and the Good Life | 3 Cr . |
| ED 454 | Faith, Ethics, and Teaching | 3 Cr . |
| ED 470 | Diversity, Equity, and Education | 3 Cr . |
| SPED 440 | Learning Exceptionalities | 3 Cr . |

The Education Minor does NOT meet the requirements necessary for licensure.

## Special Education Minor (Minimum 19 Cr.)

To earn a minor in Special Education, students must earn a minimum of 19 credit hours in SPED classes to earn K-12 licensure in special education. Supervised teaching (SPED 449) includes one half semester in a general education classroom and the other half in a special education setting. SPED 440 does not count toward this minor because it is a required course for all pre-service teachers. Since this minor leads to K-12 licensure in the mild intervention content area and several required teacher performance standards are embedded in additional education courses, the special education minor is open to education majors only.

Courses must include:

| SPED 347 | Characteristics of Individuals with Mild Disabilities | 3 Cr . |
| :--- | :--- | :--- |
| SPED 441 | Assistive Technology | 1 Cr. |
| SPED 444 | Assessment in Special Education | 3 Cr . |
| SPED 445 | Teaching the Student with Mild Disabilities | 3 Cr. |
| SPED 450 | Models of Collaboration and Consultation in Special Education | 3 Cr. |
| SPED 451 | Applied Behavior Analysis | 3 Cr. |
| SPED 466 | Teaching Reading to Students with Disabilities | 3 Cr. |

## The Teacher Education Program

## Colloquium

The department hosts two colloquia events each semester. The purpose of the colloquia are to introduce education students to educational ideas, topics, and issues which go beyond the program courses, providing students and faculty with an opportunity to gather together as a department around our passion for education and sound educational practices.

## Admission (Checkpoint 1)

Admission to the program is the first of three checkpoints in the performance assessment process in education. Students will apply to the Teacher Education program and sign up for a Taskstream account in ED 206. Transfer students should contact the Education Department to obtain an application and information about signing up for Taskstream. Transfer credits will be evaluated by the licensing director. The application process may take one semester.

The criteria for admission to education are:

1. Grade point average

Must have a minimum of 12 credit hours at Valparaiso University, a cumulative grade point average of 3.0 or higher in all coursework taken at Valparaiso University, and a grade of $\mathrm{C}+$ or better in the required education coursework
2. Communication grade point average

Must have a grade point average of 2.50 or better in CORE or CC 110 , CORE or CC 115 , and COMM 243 , with no individual course below a C

Teacher Candidates are expected to maintain acceptable, professional-level standards of communication and conduct. Education professors and school partners (principals, teachers, and staff) monitor, evaluate, and provide feedback about teacher candidates' dispositions. If deficiencies in written or oral communication are noted, applicants may be required to take remedial steps under the direction of their advisor.

## 3. Basic Skills Test

Must demonstrate competency in basic skills through submission of passing scores on ONE of the following standardized tests: 1) ACT with a score of at least 24 based on Math, Reading, Grammar, and Science; 2) SAT with a score of at least 1100 based on Critical Reading and Math; 3) GRE with a score of at least 1100 based on Verbal and Quantitative; or 4) Passing scores on appropriate licensure exams as outlined by the Indiana Department of Education. Information about test registration and administration is available in the department office, and from instructors in ED 206 and the Block 1 ED 350 Seminar.

## 4. Dispositions

Must demonstrate the professional dispositions necessary for success in the teaching profession
Dispositions are the "professional attitudes, values, and beliefs demonstrated through both verbal and non-verbal behaviors as educators interact with students, families, colleagues, and communities" (National Council for Accreditation of Teacher Education).

Each semester, students' dispositions are assessed formally and informally by instructors and field experience supervisors. Positive recommendations need to be obtained from the student's ED 206 and ED 304 instructors, major, academic advisor, and the field experience cooperating teacher. Disposition concerns, as they arise, are communicated directly to the student and, if necessary, remediation steps are outlined. Persistent dispositional concerns (e.g. excessive absences, poor communication) may result in probation or dismissal from the program.
5. Declared Major or Complementary Major

Must declare one of the following majors in the Office of the Registrar: Elementary Education or a complementary major in Secondary Education - prior to applying for admission to the Teacher Education Program

## 6. Checkpoint 1 Essay

Must submit the required Checkpoint 1 essay to the department. This essay is a required assignment in ED 206 that students must upload to their Taskstream account. Students purchase and maintain an active Taskstream account throughout the duration of their time in the program.

## Admission to the Professional Semester (Checkpoint 2)

Applications for Admission to the Professional Semester must be completed and filed with the Field Placement Office the semester before the Professional Semester.

The criteria for admission to the Professional Semester in education are:

1. Official admission to the Teacher Education Program

Must have already successfully completed Checkpoint 1
2. Grade Point Average

Must have a minimum cumulative grade point average of 3.0 in both the content and Education major, and maintain a grade of $\mathrm{C}+$ or higher in all education coursework
3. Senior standing

Must be within two semesters and one summer of graduation
4. Dispositions

Must demonstrate in all classes the social and emotional maturity, responsibility, and professional dispositions necessary for success in the teaching profession (see point \#4 under checkpoint \#1)
5. Recommendations

Secondary students must submit a written recommendation from their major advisor to take the Professional Semester.

## 6. Certification/Training

Must complete CPR, Heimlich, and AED certification as well as suicide prevention training prior to starting the professional semester

This is subject to change with state requirements.
7. Content Area Licensure Examinations

Must take and pass the appropriate Indiana Department of Education licensure examinations at the required times. Each semester, the coordinator of licensure will communicate key deadlines for licensure exams. Before the professional semester, teacher candidates must take and pass their content exam.

## Professional Semester (Checkpoint 3)

Required of all candidates who wish to be recommended for an initial teaching license, this semester includes coursework, student teaching, and submission of the Checkpoint 3 requirements. Artifacts for Checkpoint 3 will be based primarily upon the student teaching experience. During this semester, students may enroll only in courses approved for the Professional Semester.

## Placement in Field Experiences/Student Teaching

The Teacher Education Program involves coursework that requires significant amounts of field experience. The placement and direction of all practicum experiences are the responsibility of the Director of Field Placement. Teacher candidates may not receive any compensation for work done in a school while receiving University course credit for the work.

A criminal background check is required annually prior to the first day of any fieldwork in the department. Discovery of a criminal record may delay or preclude field assignments. Students are responsible for arranging their own transportation to assigned schools. Note: Students are responsible for signing the student transportation form at the onset of the Education program.

## Placement of Graduating Teachers

The Field Placement Office assists beginning and experienced teacher candidates who have completed requirements for licensure. All candidates are encouraged to file their credentials with this office before graduation.

Students who complete their education at Valparaiso University are entitled to use the placement services at no cost until September 30 after the completion of the licensure program. A twenty-dollar fee is charged per year if a teacher candidate wishes to use the placement services after this time.

## Appeal Process

Students may appeal Checkpoint decisions to the chair of the Education Department. The appeal must be made in writing within 2 weeks of the decision with explanation, rationale for appeal, and attachment of all related forms and correspondence.

## Education Courses

ED 206

## School and Society

3 Cr .
This course is for teacher education students and those who wish to explore teaching as a career. It includes an introduction to the teaching profession, what it takes to become a teacher, the role of teachers, standards that govern education, and an introduction to the summative portfolio process in the department's teacher education programs. This course will also provide students with a historic overview of the cultural and economic forces that have shaped the purposes of schooling in the United States. May be used to partially fulfill the Social Science component of the General Education requirements.

Educational Psychology
$3+0,3 \mathrm{Cr}$.
This course will focus on human learning in the educational setting. Students will explore theories of child development, learning, and motivation. Students will investigate a variety of theories and apply them to educational situations to achieve a deeper understanding of how children develop as learners. The course will center on a range of concepts, both cognitive and social, and on ways students might use these to become more insightful, sensitive, and skilled as educators. Course includes a field experience in an elementary, middle, or secondary school setting.

ED 310/510 Foundations in Emergent and Early Literacy 3 Cr.
This course focuses on the emergent and early stages of literacy development. Drawing upon the evidence gleaned through case study research into literacy development in families and schools, the course highlights the professional characteristics, instructional practices, and assessment approaches that foster literacy learning in early childhood environments. A field experience is required.

ED 323/523 Methods of Science Education
4 Cr .
This course will (1) explore the basic orientations that will have survival value in our world, and (2) study the philosophy of science education with an understanding of three methods used for science instruction: Discovery Model, Inquiry Model, and Experiential Model. This course includes assessment practices for science education and a field component. Prerequisite: Admission to Teacher Education and ED 350.
ED 324/524 Methods of Teaching Mathematics in the Elementary School 4 Cr. A study of techniques and instructional materials for teaching mathematics in the elementary school. Topics include sequencing, diagnostic and remediation strategies, and appropriate use of concrete materials in planning, organizing, implementing, and evaluating instructional practice. This course includes assessment practices for mathematics education and a field component. Prerequisite: Admission to Teacher Education and ED 350.

This course is designed to (1) study the historical development and present trends in the subject area of social studies, (2) explore the role of social studies in school curriculum, (3) examine current methods and materials unique to social studies, and (4) plan and implement a social studies unit. This course includes assessment practices for social studies education and a field component. Prerequisite: Admission to Teacher Education and ED 350.

Study and practice of instructional methods of teaching English in secondary schools. Field work required. Prerequisite: ED 350.
ED 382/582 Methods of Teaching Mathematics in Secondary Schools 3 Cr.
Study and practice of instructional methods of teaching mathematics in secondary schools. Field work required. Prerequisite: ED 350.
ED 383/583 Methods of Teaching Social Studies in Secondary Schools 3 Cr.
Study and practice of instructional methods of teaching social studies in secondary schools. Field work required. Prerequisite: ED 350.

ED 384/584 Methods of Teaching Science in Secondary Schools
3 Cr .
Study and practice of instructional methods of teaching science in secondary schools. Field work required. Prerequisite: ED 350.

ED 386/586
Educational Art: Methods and Materials Workshop
3 Cr .
This course provides the prospective teacher with studio experience in the selection, organization, and use of twoand three- dimensional art and craft materials. Students will learn to format lesson plans in accordance with state and national standards, following the discipline-based art education model. Field work required. Prerequisite: ED 350.

ED 387/587 Methods of Teaching Foreign Language in Secondary Schools 3 Cr .
Study and practice of instructional methods of teaching foreign language in secondary schools. Field work required. Prerequisite: ED 350.

ED 388/588
Literacy in the Elementary School
4 Cr .
With a focus on the relationship between assessment, instruction, and curriculum, this course presents evidencebased paradigms for planning a classroom environment for literacy learning, designing diagnostic teaching sequences for individual learners, documenting responsiveness to intervention, and supporting literacy development for all learners in a diverse elementary classroom setting. A field experience is required. Prerequisite: ED 310.

Seminar: Introduction to the Profession of Education
0 Cr .
This seminar provides an introduction to the profession of education. S/U grade only.
Designing Curriculum, Assessment, and Learning Plans 3 Cr.
This course prepares pre-service educators to take an active role in identifying the desired results of instruction, determining what assessments constitute evidence of learning, and providing learning experiences in support of these pedagogical aims. This course must be taken before student teaching. Prerequisite: Admission to Teacher Education and ED 350.

Literacies Across the Content Areas
3 Cr .
This course includes readings, experiences, writing opportunities, and discussions which lead to an understanding of literacy, the reading process, and the critical role language plays in the learning process. Students gain knowledge of specific assessment tools and processes, methods for planning instruction, and a range of reading, writing, and study strategies appropriate for helping pupils read to learn. Prerequisite: Admission to Teacher Education and ED 350.

English Language Learning Methods
3 Cr.
This course surveys current theory and practice in planning, implementing, and monitoring instruction of linguistically and culturally diverse students in a variety of English language teaching contexts. It focuses on methodologies and techniques for teaching English as a new language, as well as evaluation of materials for various levels and instructional goals. This course includes a field experience. Prerequisite: ED 350.
$\qquad$


Investigation of Contemporary Topics in Science
$2+2,3 \mathrm{Cr}$.
A team-taught course that includes modules focused on issues in contemporary science that require some basic understanding of multiple disciplines, from the set of biology, chemistry, earth science, mathematics, and/or physics. Classroom lectures and discussions will provide the basic science and mathematical content knowledge required to explore interdisciplinary science issues. The laboratory will provide an environment in which the students will construct numerical models of complex physical systems. This course does not fulfill the Natural Science General Education requirement. Prerequisites: Students must be admitted to the Secondary Education program and have junior standing or consent of the instructor.

## Media Literacy and Critical Praxis

3 Cr.
This course provides an introduction to media literacy as a critical framework through which to analyze the sociocultural and economic contexts of our production, representation, and engagement with media. Students will explore the role of media in learner social development and content knowledge; draw from critical media education frameworks to analyze representations of discipline content in texts both within and outside of school contexts; and draw from media education instructional strategies to develop media literacy lesson plans that reflect the dialogic relationship between production, text, and audience. Appropriate for elementary, middle, and secondary education students. Prerequisite: ED 350.

Faith Learning Community 1 Cr . Integrated with Valparaiso University's liturgical and worship community, this seminar cultivates faith community among aspiring teachers. Each week, participants gather and reflect on the vocation of teaching through the lens of one's personal faith. Weekly attendance with a worship community is strongly encouraged. Prerequisite: ED 350.

ED 439 Supervised Teaching in the Elementary Grades 12 Cr .
In this course, each student is assigned to an elementary school classroom under the direction of a cooperating teacher and University field instructor. The field experience includes a minimum of 14 weeks during the semester of full-time classroom observations, classroom teaching, and related activities. Prerequisites: senior standing and admission to the Professional Semester. See Admission to the Professional Semester above for conditions of eligibility. Students enrolled in this course should also enroll in ED 451 and ED 452, and may not carry a load of more than 14 credit hours. S/U grade.

Seminar: Efficacy in Professional Practice
1 Cr.
The primary aim of this seminar is to help future educators integrate their student teaching experience with University coursework and educational research. Course readings, assignments, and activities structure students' evaluation of their own teaching practice more broadly through collaborative, critical inquiry. The class supports development of the summative assessment for Checkpoint 3. Corequisite: ED 439, ED 459, ED 479, or SPED 449. Prerequisite: ED 350 . S/U grade.

Seminar: Praxis Reflection
1 Cr .
This seminar follows the student teaching semester. Students reflect and examine essential questions in light of their student teaching praxis. Co-requisite: ED 439, ED 459, ED 479, or SPED 449. S/U grade.

ED 453/553 Spiritual Practices, Teaching, and the Good Life 3 Cr .
Drawing primarily from the Christian tradition, this course explores teaching as fundamentally a spiritual endeavor. In addition to content and pedagogical knowledge the best teachers possess distinctive habits, practices, and ways of seeing. Teacher education research increasingly underscores the importance of dispositions as critical for transformative and effective teaching. This course explores spiritual practices that sustain and nourish human flourishing generally, and excellent teaching dispositions in particular. Although this course invites students to partake and experiment with spiritual practices, no spiritual and/or religious commitments are required. Prerequisites: ED 206 and ED 350.

Faith, Ethics, and Teaching 3 Cr.
This course explores how faith informs the way we see, and how we teach across the disciplines. Whether intended or not, teachers impart, reinforce, and/or deconstruct students' metaphysical assumptions about human nature and purpose. Prerequisites: ED 206 and ED 350.12 CrEach student is assigned to a secondary school for laboratory experiences in teaching, which includes a minimum of14 weeks during the semester of full-time classroom observation, teaching, and related activities. Prerequisite:senior standing and admission to the professional semester. See Admission to the Professional Semester above forconditions of eligibility. Students enrolled in this course should also enroll in ED 451 and ED 452 and may not carry aload of more than 14 credit hours. S/U grade.
ED 465/565 Literacy in Socio-Cultural Contexts ..... 4 Cr .This course requires students to plan responsive instruction in a whole class setting and to prepare differentiatedinstructional plans for individuals and small groups within that classroom setting. Based upon an analysis of theclassroom environment and the diverse learning needs of learners in that environment, students will prepare andimplement literacy studies appropriate for the setting of their field placement. A field experience is required.Prerequisites: ED 310 and ED 329.
Diversity, Equity, and Education 3 Cr . This course focuses on creating meaningful and relevant teaching and learning for culturally and linguistically diverse students. Legal issues and a historical perspective are used to examine the student's civil rights and the ways that prejudice, culture, language diversity, and socioeconomic factors influence the student's academic success or lack of it within the current system and under the current policies. The cultures of students are studied and used in planning and cultivating culturally responsive learning/instruction and positive cultural identity in the family and community relations. Field experience is required. All students admitted to the teacher education program must take this course. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. Prerequisite: ED 206 and ED 350.
ED 479 Supervised Teaching in Middle School Grades 12 Cr.
Each student will be assigned to a middle school under the direction of a middle school teacher and University field instructor. The field experience includes a minimum of 14 weeks during the semester of full-time classroom observation, teaching, and related activities. Prerequisite: senior standing and admission to the professional semester. See Admission to the Professional Semester above for conditions of eligibility. Students enrolled in this course should also enroll in ED 451 and ED 452, and may not carry a load of more than 14 credit hours. S/U grade.
Current Problems in Education
1-3 Cr.
An intensive study of an area of education. Subtitles, amount of credit, and content depend on instructor's choice and student interest. Prerequisite: Admission to Teacher Education.
ED 495 Independent Study in Education 1-3 Cr. Independent work to be done in a specific area of education as agreed upon by the student and faculty advisor. Proposals must be approved by the chair of the department. Prerequisite: Admission to Teacher Education.

## Special Education Courses

SPED 347/547 Characteristics of Individuals with Mild Disabilities
3 Cr .
This course is designed to provide information on academic, cognitive, social, behavioral, and emotional characteristics of individuals with mild disabilities. Topics include federal and state laws governing special education; processes involved in identifying students as having one of the disabilities considered "mild"; specific characteristics of students who have mild disabilities in various areas of development or functioning; characteristics of various education service delivery systems; and introduction to interventions for students with mild disabilities in grades 1-12. Course also include a field component in an elementary or middle school or high school special education setting.

A course that introduces special education laws passed since 1970 that govern the provision of current special education services for students with various disabilities, the characteristics of students with disabilities, instructional and classroom practices associated with educating these students in multicultural and least restrictive environments, and basic techniques for education professionals to work together with parents and students. A field experience is required. Prerequisite: admission to the Teacher Education Program and ED 350. Required of all teacher education students.

## SPED 441/541 Assistive Technology

This course provides an overview of Assistive Technology (AT) that supports or enhances learning for students with special needs. Emphasis will be on developing an awareness of the diverse AT devices and software readily available which, when used according to the principles of universal design, may improve learning for all students.

## SPED 444/544 Assessment in Special Education

This course is designed to develop test administration and test interpretation skills in teacher candidates for the types of tests used in the identification of various disabilities and tests used to plan instruction programs. Psychometric properties of tests are also addressed. Tests/types of assessments addressed in this course include intelligence tests, achievement tests, adaptive behavior and other behavior rating scales, psychological process tests, learning capacity and aptitude instruments, observational assessment, and curriculum-based assessment. Prerequisite or Corequisite: SPED 347 or consent of chair of the department. Required of all special education minors.

3 Cr .
This course provides teacher candidates with knowledge of various compensatory, corrective, and remedial instructional strategies in curriculum areas addressed in grades K -12 including reading/language arts, mathematics, social studies, and science content areas, social skills, study skills, vocational skills, and adaptive behaviors. Course experiences emphasize effective, research-based teaching methods, diagnostic-prescriptive teaching techniques, and individual education/transition planning for students with mild disabilities at the elementary, middle school, and secondary levels. Includes a field experience with students with mild disabilities at one of the developmental levels. Prerequisite: SPED 347 or consent of the instructor.

Supervised Teaching in General and Special Education
12 Cr.
This course combines into one semester the experience of observation, classroom teaching, and participation in related early/middle childhood, early adolescent, and adolescent/young adult special education settings. Under the direction of the cooperating teachers and University field instructors, the teacher candidate will have appropriate experiences at a particular developmental level in both general and special education setting. Prerequisites: senior standing, ED 350, SPED 445, and admission to the professional semester. S/U grade.

## SPED 450/550 Models of Collaboration and Consultation in Special Education <br> 3 Cr .

The provision of effective services for students with disabilities requires school-based professionals to work with each other, external agencies, parents, and the students themselves. This course is designed to address the knowledge, skills, and dispositions required of education professionals in the collaborative delivery of these services in various educational settings. Topics include models of collaboration and consultation, skills required for effective collaboration and consultation, conflict management, and methods to address roadblocks to collaboration. Prerequisite or Corequisite: SPED 347 or consent of the instructor.

## SPED 451/551 Applied Behavior Analysis

3 Cr.
Many students with mild disabilities exhibit social, learning, and/or behavioral problems that must be addressed in order to provide the students with appropriate educational programming. This course will provide education professionals with knowledge and experiences assessing behavior through various assessment techniques including functional assessment, planning behavioral interventions, and implementing behavior and classroom management procedures using best practice techniques. Information on legal mandates related to behavior management is also included. Prerequisite or Corequisite: SPED 347 or consent of the instructor.

Teaching Reading to Students with Disabilities
3 Cr .
This course teaches the organization of formal and informal reading assessment, planning, and instruction required to meet the needs of students with disabilities. A field component is included. Prerequisite for Elementary Majors: ED 310 and ED 329. Prerequisite for Middle School and Secondary Majors: ED 460.

An intensive study of an area of special education. Subtitles, amount of credit, and content depend on instructor's choice and student interest.

Independent work to be done in a specific area of special education as agreed upon by the student and faculty advisor. Proposals must be approved before registration by the chair of the department.


## English

Learn more about the Department of English at Valpo online.

Professors Buinicki, Byrne, Hanson, Juneja, Ruff; Associate Professors S. Anderson, Belanger, Burow-Flak, Danger (chair), Schuette; Assistant Professors Potter, Sévère, Uhrig; Lecturers Armstrong, Grantz, Jack, Kurzinski, Langhoff.

The English Department offers a variety of courses for both English majors and other students. These courses help students to use the English language maturely and sensitively and to develop their capacities to enjoy and understand imaginative literature. Many non-English majors enroll in upper division courses, and students can expect any class to display a spectrum of interests and backgrounds. Relatively small class size allows students to cultivate a close relationship with professors and to sharpen their analytical and expressive skills through writing and discussion. In addition to preparing a student for graduate work or for teaching in secondary schools, an English major provides an excellent qualification for numerous careers and professions. Many schools of medicine, law, and theology view an English major as highly desirable for acceptance into their programs. Businesses, not-for-profit agencies, and government offices employ English majors for positions in human resources, sales and marketing, public relations, systems analysis, and advertising, as well as editing and writing. The abilities to read and understand complex material, to write and speak precisely, to think clearly, thoroughly, and subtly remain in high demand.

All students with an interest in literature are invited to join the English Society. Students of exceptional merit earn membership in Sigma Tau Delta, a national honor society, and may qualify for departmental scholarships. English elementary and secondary education majors may join the Valparaiso University affiliate of the National Council of Teachers of English.

Bachelor of Arts - English Major (Minimum 33 Cr.)

| ENGL 200 | Literary Studies | 3 Cr . |
| :---: | :---: | :---: |
| ENGL 208 | Methods of Literary Criticism and Research | 3 Cr . |
| ENGL 311 | New Literacies, Technologies, and Cultures of Writing | 3 Cr . |
| ENGL 493 | Seminar in English | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 309 | Literature of the Medieval Period | 3 Cr . |
| ENGL 320 | Literature of the Sixteenth and Seventeenth Centuries | 3 Cr . |
| ENGL 410 | Shakespeare | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 330 | Literature of the Restoration and Eighteenth Century | 3 Cr . |
| ENGL 350 | British Literature of the Nineteenth Century | 3 Cr . |
| ENGL 456 | The Novel | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 370 | Modern and Contemporary Fiction | 3 Cr . |
| ENGL 372 | Modern and Contemporary Drama | 3 Cr . |
| ENGL 375 | Modern and Contemporary Poetry | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 312 | American Literature I | 3 Cr . |
| ENGL 313 | American Literature II | 3 Cr . |

Nine additional credits from $\mathbf{3 0 0}$ or 400 -level English courses
Note: At least one course of the 33 credits required for the major must be designated as a diversity course in English.

| Secondary Education Majors - Bachelor of Arts in English (Minimum 36 Cr. ) |  |  |
| :---: | :---: | :---: |
| ENGL 200 | Literary Studies | 3 Cr . |
| ENGL 208 | Methods of Literary Criticism and Research | 3 Cr . |
| ENGL 311 | New Literacies, Technologies, and Cultures of Writing | 3 Cr . |
| ENGL 479 | Young Adult Literature | 3 Cr . |
| ENGL 493 | Seminar in English | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 309 | Literature of the Medieval Period | 3 Cr . |
| ENGL 320 | Literature of the Sixteenth and Seventeenth Centuries | 3 Cr . |
| ENGL 410 | Shakespeare | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 330 | Literature of the Restoration and Eighteenth Century | 3 Cr . |
| ENGL 350 | British Literature of the Nineteenth Century | 3 Cr . |
| ENGL 456 | The Novel | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 321 | Intermediate Composition | 3 Cr . |
| ENGL 431 | Advanced Composition | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 370 | Modern and Contemporary Fiction | 3 Cr . |
| ENGL 372 | Modern and Contemporary Drama | 3 Cr . |
| ENGL 375 | Modern and Contemporary Poetry | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 341 | History of the English Language | 3 Cr . |
| ENGL 342 | Modern English Grammar | 3 Cr . |
| ENGL 343 | Introduction to Linguistics | 3 Cr . |
| ENGL 344 | Sociolinguistics: Language Across Cultures | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 312 | American Literature I | 3 Cr . |
| ENGL 313 | American Literature II | 3 Cr . |

Three additional credits from $\mathbf{3 0 0}$ or 400 -level English courses
Note: At least one course of the 36 credits required for the major must be designated as a diversity course in English.
Complete the requirements for the Secondary Education Major. See page 119.

| ENGL 200 | Literary Studies | 3 Cr . |
| :---: | :---: | :---: |
| ENGL 201 | Introduction to Creative Writing | 3 Cr . |
| ENGL 311 | New Literacies, Technologies, and Cultures of Writing | 3 Cr . |
| ENGL 492 | Seminar in Creative Writing | 3 Cr . |
| Three courses from the following options: |  |  |
| ENGL 323 | Short Story Writing | 3 Cr . |
| ENGL 324 | Poetry Writing | 3 Cr . |
| ENGL 325 | Creative Nonfiction | 3 Cr . |
| ENGL 431 | Advanced Composition | 3 Cr . |
| THTR 252 | Writing for Stage and Screen | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 370 | Modern and Contemporary Fiction | 3 Cr . |
| ENGL 372 | Modern and Contemporary Drama | 3 Cr . |
| ENGL 375 | Modern and Contemporary Poetry | 3 Cr . |

Nine additional credits from the following options:

| $\mathbf{3 0 0}$ or $\mathbf{4 0 0}$-level | English courses |  |
| :--- | :--- | :--- |
| COMM 230 | Graphic Design I | $1+4,3 \mathrm{Cr}$. |
| COMM 330 | Graphic Design II | $0+6,3 \mathrm{Cr}$. |

Note: At least one course of the $\mathbf{3 3}$ credits required for the major must be designated as a diversity course in English.

## English

| Bachelor of Arts - Professional Writing Major (Minimum 33 |  |  |
| :---: | :---: | :---: |
| ENGL 200 | Literary Studies | 3 Cr . |
| ENGL 210 | Introduction to Business and Professional Writing | 3 Cr . |
| ENGL 311 | New Literacies, Technologies, and Cultures of Writing | 3 Cr . |
| ENGL 491 | Seminar in Professional Writing | 3 Cr . |
| COMM 230 | Graphic Design I | 1+4, 3 Cr . |
| One course from the following options: |  |  |
| ENGL 321 | Intermediate Composition | 3 Cr . |
| ENGL 431 | Advanced Composition | 3 Cr . |
| One course from the following options: |  |  |
| COMM 110 | Internet Communication | 3 Cr . |
| COMM 330 | Graphic Design II | 0+6, 3 Cr . |
| THTR 252 | Writing for Stage and Screen | 3 Cr . |
| Two courses from the following options: |  |  |
| ENGL 205 | Writing in the Health Sciences | 3 Cr . |
| ENGL 310 | Introduction to Technical Writing | 3 Cr . |
| ENGL 341 | History of the English Language | 3 Cr . |
| ENGL 342 | Modern English Grammar | 3 Cr . |
| ENGL 343 | Introduction to Linguistics | 3 Cr . |
| ENGL 344 | Sociolinguistics: Language Across Cultures | 3 Cr . |
| PHIL 145 | Elementary Logic and Critical Thinking | 3 Cr . |
| Six additional credits from the following options: |  |  |
| ENGL 296 | Traditions of Giving and Serving in American Life | 3 Cr . |
| ENGL 365 | Studies in American Literature (with chair's approval) | 3 Cr . |
| ENGL 368 | Teaching of English to Speakers of Other Languages: Theory and Methods | 3 Cr . |
| ENGL 369 | Teaching of English to Speakers of Other Languages: Methods and Practices | 3 Cr . |
| ENGL 380 | Topics in Writing | 3 Cr . |
| ENGL 484 | Topics in Language (with chair's approval) | 3 Cr . |
| ENGL 486 | Internship in English | 0.5-3 Cr. |
| ENGL 490 | Topics in Literature (with chair's approval) | 3 Cr . |
| ENGL 495 | Independent Study in English | 3 Cr . |
| Any of the courses listed above within this major |  |  |
| Note: At least one course of the $\mathbf{3 3}$ credits required for the major must be designated as a diversity course in English. |  |  |

Students who take both ENGL 321 and 431 must take 321 first. With the chair's approval, students may apply cooperative education toward fulfillment of this major.

| English Minor (Minimum 18 Cr.) |  |  |
| :---: | :---: | :---: |
| ENGL 200 | Literary Studies | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 208 | Methods of Literary Criticism and Research | 3 Cr . |
| ENGL 311 | New Literacies, Technologies, and Cultures of Writing | 3 Cr . |
| ENGL 493 | Seminar in English | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 309 | Literature of the Medieval Period | 3 Cr . |
| ENGL 320 | Literature of the Sixteenth and Seventeenth Centuries | 3 Cr . |
| ENGL 410 | Shakespeare | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 330 | Literature of the Restoration and Eighteenth Century | 3 Cr . |
| ENGL 350 | British Literature of the Nineteenth Century | 3 Cr . |
| ENGL 456 | The Novel | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 370 | Modern and Contemporary Fiction | 3 Cr . |
| ENGL 372 | Modern and Contemporary Drama | 3 Cr . |
| ENGL 375 | Modern and Contemporary Poetry | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 312 | American Literature I | 3 Cr . |
| ENGL 313 | American Literature II | 3 Cr . |
| Note: At least one course of the 18 credits required for the minor must be designated as a diversity course in English. |  |  |
| Creative Writing Minor (Minimum 18 Cr.) |  |  |
| ENGL 200 | Literary Studies | 3 Cr . |
| ENGL 201 | Introduction to Creative Writing | 3 Cr . |
| ENGL 311 | New Literacies, Technologies, and Cultures of Writing | 3 Cr . |
| ENGL 492 | Seminar in Creative Writing | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 323 | Short Story Writing | 3 Cr . |
| ENGL 324 | Poetry Writing | 3 Cr . |
| ENGL 325 | Creative Nonfiction | 3 Cr . |
| ENGL 431 | Advanced Composition | 3 Cr . |
| THTR 252 | Writing for Stage and Screen | 3 Cr . |
| Additional courses may be selected from the following options: |  |  |
| English courses numbered 300 or above |  |  |
| COMM 230 | Graphic Design I | 3 Cr . |
| COMM 330 | Graphic Design II | 3 Cr . |
| Note: At least one course of the $\mathbf{1 8}$ credits required for the minor must be designated as a diversity course in English. |  |  |

## English

## Professional Writing Minor (Minimum 18 Cr.)

| ENGL 200 | Literary Studies | 3 Cr . |
| :---: | :---: | :---: |
| ENGL 210 | Introduction to Business and Professional Writing | 3 Cr . |
| ENGL 311 | New Literacies, Technologies, and Cultures of Writing | 3 Cr . |
| ENGL 491 | Seminar in Professional Writing | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 321 | Intermediate Composition | 3 Cr . |
| ENGL 431 | Advanced Composition | 3 Cr . |
| One course from the following options: |  |  |
| ENGL 205 | Writing in the Health Sciences | 3 Cr . |
| ENGL 296 | Traditions of Giving and Serving in American Life | 3 Cr . |
| ENGL 310 | Introduction to Technical Writing | 3 Cr . |
| ENGL 341 | History of the English Language | 3 Cr . |
| ENGL 342 | Modern English Grammar | 3 Cr . |
| ENGL 343 | Introduction to Linguistics | 3 Cr . |
| ENGL 344 | Sociolinguistics: Language Across Cultures | 3 Cr . |
| ENGL 365 | Studies in American Literature (with chair's approval) | 3 Cr . |
| ENGL 368 | Teaching of English to Speakers of Other Languages: Theory and Methods | 3 Cr . |
| ENGL 369 | Teaching of English to Speakers of Other Languages: Methods and Practices | 3 Cr . |
| ENGL 380 | Topics in Writing | 3 Cr . |
| ENGL 484 | Topics in Language (with chair's approval) | 3 Cr . |
| ENGL 486 | Internship in English | 0.5-3 Cr. |
| ENGL 490 | Topics in Literature (with chair's approval) | 3 Cr . |
| ENGL 495 | Independent Study in English | 3 Cr . |
| PHIL 145 | Elementary Logic and Critical Thinking | 3 Cr . |
| Any of the courses listed above within this minor |  |  |
| Note: At least diversity cours | ourse of the $\mathbf{1 8}$ credits required for the minor must be des nglish. | ated as a |

Students who take both ENGL 321 and 431 must take 321 first. With the chair's approval, students may apply cooperative education toward fulfillment of the minor.

## Teaching of English to Speakers of other Languages (TESOL) Minor

 (Minimum 18 Cr .)| ENGL 343 | Introduction to Linguistics | 3 Cr . |
| :---: | :---: | :---: |
| ENGL 344 | Sociolinguistics: Language Across Cultures | 3 Cr . |
| ENGL 368 | Teaching of English to Speakers of Other Languages: Theory and Methods | 3 Cr . |
| ENGL 369 | Teaching of English to Speakers of Other Languages: Methods and Practices | 3 Cr . |
| ENGL 384 | Observation in TESOL | 1 Cr . |
| ENGL 487 | Practicum in TESOL | 2 Cr . |
| One course from the following options: |  |  |
| ENGL 311 | New Literacies, Technologies, and Cultures of Writing | 3 Cr . |
| ENGL 321 | Intermediate Composition | 3 Cr . |
| ENGL 341 | History of the English Language | 3 Cr . |
| ENGL 342 | Modern English Grammar | 3 Cr . |
| ENGL 380 | Topics in Writing | 3 Cr . |
| ENGL 431 | Advanced Composition | 3 Cr . |

Note: At least one course of the $\mathbf{1 8}$ credits required for the minor must be designated as a diversity course in English.

Students seeking Indiana state licensure to teach English Language Learning (ELL) also need to complete the appropriate program of study in Education.

## Diversity in Literature

The English Department affirms the significance of writing by people of color and other ethnic or minority groups and regularly includes it in literature and writing courses. In addition, the department offers specific topics courses especially focused on this writing and designed to fulfill the Cultural Diversity General Education Requirement. Representative topics include American Ethnic Literature and African- American Literature.

## Credit by Examination

Credit for ENGL 100 may be earned through the College Level Examination Program general examination in English or the subject area examination in English Composition, or through the Advanced Placement Examination offered by the College Entrance Examination Board.

Credit for ENGL 200 may be earned through the College Level Examination Program subject examination in Analysis and Interpretation of Literature or through the Advanced Placement examination offered by the College Entrance Examination Board.

## Degree

Completion of the degree requirements of the College of Arts and Sciences with a major in English leads to the Bachelor of Arts degree.

## Approval of Schedules

All students declaring a major or a minor in English should make an appointment with the chair of the department. The chair will explain the offerings and programs of the department and direct each student to additional resources. All students taking a major or minor in English must have their schedules approved by their English advisor before registration.

## Advising

The chair of the department will introduce all students to the professors who will be their advisors as long as they remain majors in the department. It is the student's responsibility to confer regularly with the advisor about course selection, internships, career planning, and related matters. It is the advisor's responsibility to help the student make a frank and realistic assessment of academic options and their consequences.

## Cooperative Education

When it will clearly enhance their academic education, qualified students may engage in paid work experiences through which they may also earn credit. No more than six credits may be applied toward the minimum major requirements. All projects must receive prior approval from the department chair and must be monitored by a member of the English Department faculty. A report from the sponsoring agency is required, as well as a written report by the student. For further information, refer to Cooperative Education, College of Arts and Sciences, page 63.

## Topics Courses

Courses in English marked by an asterisk $\left(^{*}\right.$ ) may vary in content and in writers assigned, depending on the instructor and the year given. Such courses may be taken twice for credit, provided that the topics are different or that there is no significant overlapping in the reading lists.

## English Courses

ENGL 100 College Composition
3 Cr .
An intensive course in the writing of expository and argumentative prose with emphasis upon coherent organization, the logical progression of thought, and the effective use of language.

ENGL 101 Introductory Reading and Writing for Non-Native English Speakers 4 Cr.
An intensive course in reading and in writing organized and coherent paragraphs and short academic essays, with special attention to grammar and vocabulary. Open only to students whose native language is not English. Students recommended for this course, generally as the result of a placement exam, may not take the course at the same time as any other English course.

ENGL 102 Intermediate Reading and Writing for Non-Native English Speakers 4 Cr.
An intermediate course in reading and writing skills with special attention to essay structure and genre. This course also provides a review of English grammar and of vocabulary learning skills. Open only to students whose native language is not English. Prerequisite: completion of ENGL 101 or placement by exam.

Advanced Academic Skills for Non-Native English Speakers
3 Cr .
An advanced course in academic skills with attention to a variety of forms of academic communication. This course addresses issues of advanced grammar and its relationship to genre and rhetorical moves in reading, writing, listening, and speaking. Assignments include writing thesis-driven essays, giving oral presentations, and participating in academic discussions. Open only to students whose native language is not English. Prerequisite: ENGL 101 or placement by exam.

## Literary Studies

 3 Cr .Topics are variable. Literary Studies includes a variety of readings on a specific issue, theme, or literary type, and provides practice in writing critically and analytically about imaginative literature. Possible offerings include Utopian/Dystopian Literature, Seven Deadly Sins, Banned Books and Novel Ideas, Into the Wild, Horrible Husbands-Wicked Wives. May be used to fulfill the Humanities: Literature component of the General Education Requirements. Some sections of this course may be used to fulfill the Writing Intensive General Education Requirement. May not be repeated for credit.

Introduction to Creative Writing
3 Cr .
This course examines the process and product of creative writing. Topics include stages of creative writing from invention and imagination to description and dramatization. Attention focuses on the elements of fiction, poetry, drama, nonfiction and their forms, their differences and the reasons for distinguishing among them; and the ways in which they have contributed to one another as boundaries between them have blurred. Students will practice writing in the various genres. Assignments also address issues such as the relations of authors' autobiographies to their art, and the need to craft concrete metaphors to represent abstract ideas. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Middle Eastern Literatures
3 Cr .
A survey of literature in translation from the Middle East and North Africa, with attention to major authors, genres, movements, and stylistic developments. May be used to fulfill the Cultural Diversity component of the General Education Requirement. Some sections may be used to fulfill the Writing Intensive General Education Requirement. Prerequisite: sophomore standing.

Middle Eastern Cinemas
3 Cr.
A survey of modern and contemporary films from the Middle East and North Africa, with attention to major directors, genres, movements, and stylistic developments. May be used to fulfill the Cultural Diversity component of the General Education Requirement. Some sections may be used to fulfill the Writing Intensive General Education Requirement.

## Writing for Health Sciences

3 Cr .
This course offers a detailed study of writing practices in nursing and the health professions. Students will analyze health science genres, write policy proposals, and practice research writing. The course emphasizes theories of argument, including audience analysis, organizational strategies, style, APA formatting, document design and delivery, and advanced work in information literacy in the health sciences. Prerequisite: CORE 110 and CORE 115.

Methods of Literary Criticism and Research
3 Cr .
Designed to give students practical experience in the theories and methods of modern literary scholarship and criticism. The course aims to acquaint students with the presuppositions about literature which underlie critical writing and thus to provide standards for evaluating critical and scholarly works. It also provides intensive training in the analysis of literary texts. Required for English majors. Prerequisite: ENGL 200.

Introduction to Business and Professional Writing
This course offers a detailed study of writing and speaking practices for effective communication in business, industry, and not-for-profit organizations. It combines analysis and practice in composing and executing various messages in formats including letters, memoranda, reports, proposals, and oral presentations. It also emphasizes audience analysis, organizational strategies and motivational appeals, style and language choice, format, and appearance. Teamwork, collaboration, writing technologies, peer review, information literacy, and a recursive revision process involving multiple drafts are emphasized. Prerequisite: sophomore standing. Some sections may be used to fulfill the Writing Intensive General Education Requirement.
(Also offered as COMM 270.) This course introduces students to basic concepts in film analysis. Students will employ these concepts in analyzing and describing the varied styles, functions, and social contexts of classical Hollywood, documentary, avant garde, and world art cinema. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

ENGL 296 Traditions of Giving and Serving in American Life 3 Cr.
Selected readings in the nature and purpose of charity and service in American culture. Texts include classic works from American literature and social history that raise questions of ethics, stewardship, and the common good. The course also explores how these issues are relevant in the current non-profit sector, with guest speakers and a real-world experience in making an informed gift.

ENGL 306 World Literature in English 3 Cr.
A survey of literature in English from the Global South from the twentieth century to the present, including major authors, genres, and movements. Prerequisite: ENGL 200.

ENGL 309/509 Literature of the Medieval Period 3 Cr.
A survey of medieval English lyric, ballad, narrative, drama, and romance (including Chaucer), with attention to intellectual, religious, and social background materials. Prerequisite: ENGL 200.

ENGL 310/511 Introduction to Technical Writing
3 Cr .
This course teaches engineering and science students to write and talk about design and research problems in terms that satisfy a specialist and also enable a nonspecialist to understand what the problem is and how it was (or can be) solved.

ENGL 311/512 New Literacies, Technologies, and Cultures of Writing
3 Cr.
A course in theory and practice that examines how media of expression shape texts and their interpretations. Course readings include literature and theories of textual studies in print and electronic formats. Readings emphasize the history of the book and evolving electronic new media. The course requires written papers and projects in electronic format. Prerequisite: ENGL 200.

ENGL 312 American Literature I 3 Cr.
A study of selected works of major American writers (including minority and women writers) from the Colonial period to the Civil War. Prerequisite: ENGL 200.

ENGL 313 American Literature II 3 Cr.
A study of selected works of major American writers (including minority and women writers) from the Civil War to the present day. Prerequisite: ENGL 200.

ENGL 320/520 Literature of the Sixteenth and Seventeenth Centuries 3 Cr.
An intensive survey of the poetry, prose, and drama of the English Renaissance, excluding Shakespeare, with attention to the historical and cultural backgrounds of the period. Representative writers may include More, Sidney, Spenser, Jonson, Donne, and Milton. Prerequisite: ENGL 200.

ENGL 321/521 Intermediate Composition
3 Cr .
Students examine and practice procedures common to all kinds of academic and professional writing. Particular attention is given to editing, revising, and evaluating prose forms. Not open to students who have taken ENGL 431.

ENGL 323/523 Short Story Writing
3 Cr .
A workshop in the various techniques of writing short fiction. English majors (not writing majors or minors), as well as other students, may take this course on the S/U basis. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: ENGL 201.

ENGL 324/524 Poetry Writing 3 Cr.
A workshop in the various techniques of writing poetry. English majors (not writing majors or minors), as well as other students, may take this course on the S/U basis. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: ENGL 201.

A workshop in various techniques of writing creative nonfiction, a genre that explores how the essay generates new forms when it borrows the techniques of fiction, poetry, and/or drama. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: ENGL 201.

## ENGL 330/530 Literature of the Restoration and Eighteenth Century

A survey of English poetry, fiction, nonfiction prose, and drama from 1660-1785, with attention to the historical and cultural background of the period. Representative writers may include Dryden, Swift, Pope, Fielding, Johnson, and Sheridan. Prerequisite: ENGL 200.

ENGL 341/541 History of the English Language 3 Cr.
An introduction to the development of modern English from Indo-European with emphasis upon structure and vocabulary. Prerequisite: ENGL 200.

ENGL 342/542 Modern English Grammar 3 Cr.
An introduction to recent linguistic developments such as structural grammar and transformational-generative grammar. Prerequisite: ENGL 200.

ENGL 343/543 Introduction to Linguistics
3 Cr .
An introduction to the theory and methodology of linguistics. The course includes descriptive and historical linguistics, basic notions of grammatical theory, and exploration of some of the relations of linguistics to other branches of knowledge. The presentation of general principles is supplemented by practical problems in linguistic analysis. Prerequisite: ENGL 200.

ENGL 344/544 Sociolinguistics: Language Across Cultures
3 Cr .
This course considers intersections of language, social structure, and culture, with emphasis on the study of linguistic and cultural diversity, and language variation cross-culturally on a global scale and in the U.S. Attention is given to the significance of linguistic and cultural diversity in applied contexts, such as language use in educational settings. May be used to fulfill the Cultural Diversity component or part of the Social Science component of the General Education Requirements.

ENGL 345/545 The Theory and Practice of Tutoring Writing 3 Cr.
This course introduces the theory and practice of tutoring writing and explores the unique pedagogical opportunities afforded by working individually with student writers. The course will introduce students to current writing center theory and address a range of practical issues, such as negotiating goals during writing tutorials, structuring sessions, and providing feedback. Prerequisite: sophomore standing or chair approval.

ENGL 350/550 British Literature of the Nineteenth Century 3 Cr.
A survey of British poetry and prose of the Romantic and Victorian eras, with reference to the context of British and European social and political history. Major writers may include Wordsworth, Coleridge, Keats, Hazlitt, Scott, Carlyle, Tennyson, Browning, Arnold, Dickens, Newman, and Hardy. Prerequisite: ENGL 200.

ENGL 365/565 Studies in American Literature*
3 Cr
A study of a significant movement in American literature, such as Transcendentalism, Romanticism, Naturalism, and Realism, or a group of writers related regionally, ethnically, or in some other special way. Prerequisite: ENGL 200.

ENGL 368/568 Teaching of English to Speakers of Other Languages: Theory and Methods
3 Cr .
A study of the theoretical and historical background of second language teaching as well as theories of second language acquisition, with special attention to different cultural backgrounds. Topics include practical application of theories through methods of teaching, speaking, listening, and grammar. The course will employ readings, activities, and class discussions among students from various linguistic and cultural traditions, and require them to observe an ESL class, as well as develop and teach an English language lesson. May be used to fulfill the Cultural Diversity course component of the General Education requirements.

| ENGL 369/569 | Teaching of English to Speakers of Other Languages: Methods and Practices <br> A study of practical applications of language learning involved in methods of teaching vocabulary, reading, and writing, with special attention to different cultural backgrounds. The course will employ readings, activities, and class discussions among students from various linguistic and cultural traditions. Students will observe an ESL class, as well as develop and teach an English language lesson. May be used to fulfill the Cultural Diversity course component of the General Education requirements. Prerequisite: sophomore standing. |
| :---: | :---: |
| ENGL 370/570 | Modern and Contemporary Fiction <br> Readings of significant works by British, American, and Anglophone fiction writers since 1900, as well as some possible attention to related influential writings from other time periods or languages. Prerequisite: ENGL 200. |
| ENGL 372/572 | Modern and Contemporary Drama <br> Readings of significant works by British, American, and Anglophone playwrights since 1900, as well as some possible attention to related influential writings from other time periods or languages. Prerequisite: ENGL 200. |
| ENGL 375/575 | Modern and Contemporary Poetry <br> Readings of significant works by British, American, and Anglophone poets since 1900, as well as some possible attention to related influential writings from other time periods or languages. Prerequisite: ENGL 200. |
| ENGL 380/580 | Topics in Writing* <br> An open topics course, which may involve intensive writing in a particular genre (for example, the personal essay, dramatic poetry, longer fiction), or writing for a particular audience (for example, writing for children and young adults). |
| ENGL 384 | Observation in TESOL <br> Observation of teaching English to non-native English speakers. Students spend approximately 30 hours in observation. Prerequisite: ENGL 368 and ENGL 369. |
| ENGL 410/510 | Shakespeare <br> Close readings of representative plays: histories, comedies, and tragedies. Prerequisite: ENGL 200. |
| ENGL 431/531 | Advanced Composition <br> A course for students who have mastered fundamental writing skills and are prepared to study and practice writing processes in a more sophisticated and rigorous fashion. The course considers how to generate and organize ideas, how to adapt writing for various audiences and purposes, and how to revise, edit, and polish writing components of a developing and mature style. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. |
| ENGL 456/556 | The Novel <br> A study of representative English novels of the eighteenth and nineteenth centuries, with discussion of the social background. Prerequisite: ENGL 200. |
| ENGL 478/578 | Literature for Children <br> A survey, by types, of distinguished literature for children, with emphasis on developing analytical and evaluative techniques. Introduction to bibliographical aids, review media, and research. Prerequisite: ENGL 200. |
| ENGL 479/579 | Young Adult Literature <br> This course surveys literature suitable for students in middle and secondary schools with emphasis on young adult literature and the development of analytical and evaluative techniques. The course includes an introduction to current research in the field. Prerequisite: ENGL 200. |
| ENGL 481 | Cooperative Education in English I <br> Professional work experience which education. Written report required. Prerequisite: approval of the chair of the department. |
| ENGL 482 | Cooperative Education in English II <br> Continuation of ENGL 481. Prerequisite: ENGL 481. |
| ENGL 483 | Cooperative Education in English III <br> Continuation of ENGL 481. Prerequisite: ENGL 481. May be repeated beyond 483 for additional credit. |

## ENGL 484/594 Topics in Language

3 Cr .
An open-topic course, which may concern a single issue in language or linguistics (e.g. Language and Gender, Lexicography: Dictionaries and Dictionary Writing, Genre Analysis: Culture and Rhetoric, Exploring English for Academic Purposes).

ENGL 486 Internship in English
0.5-3 Cr.

Students gain experience working for organizations or agencies in which skills in effective writing, critical thinking, or literary scholarship are essential. A written report is required. Prerequisite: approval of the chair of the department.

ENGL 487 Practicum in TESOL 1-2 Cr.
Exposure to and guidance in the practical work of teaching English to non-native English speakers. Students spend approximately 45 hours per credit in preparation of lessons, teaching, and reflection. Prerequisite: ENGL 368 and ENGL 369. Course may be repeated for credit.

ENGL 490/590 Topics in Literature* 3 Cr. An open-topic course, which may concern a single writer or group of writers; a literary type or theme (e.g., Politics and Literature, Novel of Social Criticism, Sacred Tales, Black Spiritual Narratives); a contemporary art form (e.g., Contemporary Poetry); or an aspect of modern popular culture. Prerequisite: ENGL 200.

ENGL 491/591 Seminar in Professional Writing
3 Cr .
Students will reflect critically on the meaning of certain writing tasks in the cultures of working society. They will become more aware of such topics as the ethics of marketing strategies as applied to writing projects and assignments. They will learn enough about a subject to write not only exploratory but editorial and opinion pieces about it. Attention also will focus on the techniques, problems, and strategies of grant writing, editing the writing of others, and association publishing. Prerequisite: ENGL 210 and one of ENGL 321 or ENGL 431, or approval of the chair of the department.

## ENGL 492/592 Seminar in Creative Writing

3 Cr .
Students consider various forms of creative writing (drama, fiction, nonfiction, poetry), but focus their work in a single genre. Requirements include a series of progress papers and a substantial portfolio of creative work. Prerequisite: ENGL 201 and one of ENGL 323, ENGL 324, ENGL 325, or ENGL 431, and senior standing, or approval of the chair of the department.

ENGL 495 Independent Study in English
3 Cr .
Designed to provide advanced students an opportunity to do serious research on a topic which is not covered in any regularly scheduled course offered by the English Department. In advance of the semester in which students plan to undertake projects, they must arrange for directors and secure approval from the chair of the English Department.

ENGL 497 Honors Work in English Literature 3 Cr. See Honors Work, page 63.

Honors Candidacy in English Literature
3 Cr .
See Honors Work, page 63.

## Environmental Science

Learn more about the Environmental Science program at Valpo online.


## Administrative Committee: Professors Eberhardt (Biology), Longan (Geography and Meteorology, chair); Associate Professors Aljobeh (Civil Engineering), Devaraj (Economics), Ganesh Babu (Geography and Meteorology), Peller (Chemistry), Schoer (Chemistry).

## Objectives

The Environmental Science Program, through collaboration with faculty in multiple disciplines who demonstrate excellence in teaching and scholarship of environmental merit, gives its students the requisite scientific background necessary for assessing environmental systems, along with philosophical, pedagogical, and social reflection on environmental issues. The core curriculum includes perspectives on scientific knowledge, field work, and communication skills. Elective courses expose students to a wide range of environmental topics from a variety of disciplines, providing both an engaging curriculum that promotes interest in and passion for environmental issues, and opportunities for cross-disciplinary interaction. An Environmental Science major positions the student to enter into graduate work in environmental science or policy, or into the professions of environmental management and protection.

## Degree

Students who complete the Environmental Science program will fulfill the major field requirements for the Bachelor of Science degree. Students who complete the Environmental Science Complementary Major of 32 credits with a first major in a disciplinary science field (astronomy, biology, chemistry, computer science, engineering, geography, mathematics, meteorology, physics, psychology) will also have fulfilled the major field requirements for the Bachelor of Science degree. Students who complete the Environmental Science Complementary Major of 32 credits with a first major in a non-science field, including the B.A. option in geography, will have fulfilled the major field requirements for the Bachelor of Arts degree.

| Bachelor of Science - Environmental Science Major (Minimum 52 Cr .) |  |  |
| :---: | :---: | :---: |
| Environmental Science |  | 30 Cr . |
| One course from the following options: |  |  |
| BIO 250 | Human Environmental Biology | 3 Cr . |
| GEO 260 | Environmental Conservation | 3 Cr . |
| BIO 171 | Unity of Life | 3+3,4 Cr. |
| BIO 172 | Diversity of Life | 3+3, 4 Cr . |
| CHEM 121 | General Chemistry I | 3+3, 4 Cr . |
| CHEM 122 | General Chemistry II | 3+3, 4 Cr . |
| GEO 104 | Introduction to Geomorphology | 2+4, 4 Cr. |
| GEO 215 | Introduction to Geographic Information Systems | $3+2,4 \mathrm{Cr}$. |
| One of the following: |  |  |
| CE 202 | Statistical Applications in Civil Engineering | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| GEO/MET 460 | Data Analysis | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis |  |
| Environment and Socie | Elective | 3 Cr . |
| One course from the following options: |  |  |
| GEO 321 | Urban and Regional Planning | 3 Cr . |
| ECON 210 | Environmental Economics and Policy | 3 Cr . |
| PSY 355 | Environmental Psychology | 3 Cr . |
| Any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| Environmental Meanin | and Values Elective | 3 Cr . |
| One course from the following options: |  |  |
| GEO 475 | Culture, Nature, Landscape | 3 Cr . |
| PHIL 230 | Environmental Philosophy and Ethics | 3 Cr . |
| Any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| Environmental Science | ectives | 14 Cr . |
| Minimum of 14 credit hours from the following options: |  |  |
| BIO 350 | Field Biology: Spring | 2+4, 3 Cr. |
| BIO 440 | Ecology | $3+4,4 \mathrm{Cr}$. |
| CHEM 221 | Organic Chemistry I | 3+3, 4 Cr . |
| CHEM 222 | Organic Chemistry II | 3+3, 4 Cr . |
| CHEM 230 | Quantitative Analysis | 3+3, 4 Cr. |
| ENVS 290 | Topics in Environmental Science | $1-3 \mathrm{Cr}$. |
| ENVS 490 | Advanced Topics in Environmental Science | 1-3 Cr. |
| GEO 365 | Biogeography | 3 Cr . |
| GEO 385 | Field Study (when an environmental field study) | 0+4, 1-3 Cr. |
| GEO 415 | Advanced Geographic Information Systems | 3 Cr . |
| GEO/MET 240 | Introduction to Climate Change | 3 Cr . |
| MET 440 | Global Climate Change | 3 Cr . |
| Or any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| These must include at least $\mathbf{1 1}$ hours at a level of $\mathbf{3 0 0}$ or higher. |  |  |
| Capstone Experience |  | 2-4 Cr. |
| ENVS 499 | Colloquium on Environmental Science and Management | 1 Cr . |
| One additional course from the following options (ENVS 499 can be repeated for credit): |  |  |
| ENVS 381 | Cooperative Education in Environmental Science | 1-2 Cr. |
| ENVS 386 | Internship in Environmental Science | 0.5-3 Cr. |
| ENVS 495 | Independent Research in Environmental Science | 0.5-3 Cr. |
| ENVS 499 | Colloquium on Environmental Science and Management | 1 Cr . |

## Complementary Environmental Science Major (Minimum 32 Cr .)

A student with a first major that is not an interdisciplinary major is eligible to take the Environmental Science complementary major. A minimum of 32 credit hours must be taken according to the following requirements and in accordance with the Restrictions for Interdisciplinary Majors from the Interdisciplinary Programs section of this catalog (see page369).

| Environmental Science |  | 14 Cr . |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| BIO 250 | Human Environmental Biology | 3 Cr . |
| GEO 260 | Environmental Conservation | 3 Cr . |
| Minimum of 11 credit hours from the following options: |  |  |
| BIO 171 | Unity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 172 | Diversity of Life | $3+3,4 \mathrm{Cr}$. |
| CHEM 121 | General Chemistry I | $3+3,4 \mathrm{Cr}$. |
| CHEM 122 | General Chemistry II | $3+3,4 \mathrm{Cr}$. |
| GEO 104 | Introduction to Geomorphology | $2+4,4 \mathrm{Cr}$. |
| GEO 215 | Introduction to Geographic Information Systems | $3+2,4 \mathrm{Cr}$. |
| PSY 201 | Statistical Methods | 3 Cr . |
| Environment and Society Elective |  | 3 Cr . |
| One course from the following options: |  |  |
| GEO 321 | Urban and Regional Planning | 3 Cr . |
| ECON 210 | Environmental Economics and Policy | 3 Cr . |
| PSY 355 | Environmental Psychology | 3 Cr . |
| Any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| Environmental Meaning | and Values Elective | 3 Cr . |
| One course from the following options: |  |  |
| GEO 475 | Culture, Nature, Landscape | 3 Cr . |
| PHIL 230 | Environmental Philosophy and Ethics | 3 Cr . |
| Any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| Environmental Science | ctives | 10 Cr. |
| Minimum of 10 credit hours from the following options: |  |  |
| BIO 350 | Field Biology: Spring | 2+4, 3 Cr . |
| BIO 440 | Ecology | $3+4,4 \mathrm{Cr}$. |
| CHEM 221 | Organic Chemistry I | $3+3,4 \mathrm{Cr}$. |
| CHEM 222 | Organic Chemistry II | $3+3,4 \mathrm{Cr}$. |
| CHEM 230 | Quantitative Analysis | $3+3,4 \mathrm{Cr}$. |
| ENVS 290 | Topics in Environmental Science | 1-3 Cr. |
| ENVS 490 | Advanced Topics in Environmental Science | 1-3 Cr. |
| GEO 365 | Biogeography | 3 Cr . |
| GEO 385 | Field Study (when an environmental field study) | 0+4, 1-3 Cr. |
| GEO 415 | Advanced Geographic Information Systems | 3 Cr . |
| GEO/MET 240 | Introduction to Climate Change | 3 Cr . |
| MET 440 | Global Climate Change | 3 Cr . |
| Any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| These must include at least 7 credit hours at a level of $\mathbf{3 0 0}$ or higher. |  |  |
| Capstone Experience |  | 2-4 Cr. |
| ENVS 499 | Colloquium on Environmental Science and Management | 1 Cr . |
| One additional course from the following options (ENVS 499 can be repeated for credit): |  |  |
| ENVS 381 | Cooperative Education in Environmental Science | 1-2 Cr. |
| ENVS 386 | Internship in Environmental Science | 0.5-3 Cr. |
| ENVS 495 | Independent Research in Environmental Science | 0.5-3 Cr. |
| ENVS 499 | Colloquium on Environmental Science and Management | 1 Cr . |

## Environmental Studies Minor

The Environmental Studies minor is described in the Interdisciplinary Programs section, page 373.

## Environmental Science Courses

ENVS 290 Topics in Environmental Science
Topical studies in Environmental Science. Topics might include water resources, air pollution, environmental restoration, sustainable energy, or other topics of interest. May be repeated for credit when the topic is different. Prerequisite: certain topics may have specific course requirements.

ENVS 381

ENVS 386

Independent Research in Environmental Science 0.5-3 Cr.

Students work on a project of environmental and scientific merit under the guidance of a faculty sponsor. Final report required. S/U grade only. May be repeated for additional credit. Prerequisites: Environmental Science major or minor, consent of the chair of Environmental Science and consent of the faculty sponsor.

ENVS 499 Colloquium on Environmental Science and Management 0-1 Cr.
This course contains (1) presentations by students, faculty, and guest speakers on current topics in environmental research, issues, policy, and management; (2) reading and discussion of items of interest in the environmental literature; and (3) occasional workshops on topics such as public communication or technical and grant writing skills. Specific content will vary based on interests of students and faculty. S/U grade only. May be repeated for credit.

## Foreign Languages and Literatures

Learn more about the Department of Foreign Languages and Literatures at Valpo online.

## Professors S. DeMaris, Duvick; Associate Professors Ames, Hoult-Saros (chair), Malchow, Miguel-Pueyo, Tomasik, Zamora-Breckenridge; Assistant Professors Fuchs, Karas, Kavanagh, Lien, López Martín; Lecturers Berrier, Cochran, Jennings.

To study a foreign language is to see the world through the eyes of another culture. In our increasingly global community, knowledge of a foreign language and awareness of transcultural issues are crucial for all citizens of the world. Foreign language study is thus an important facet of any area of University study. The Department of Foreign Languages and Literatures offers a diverse range of courses that not only teach students to express themselves in another language but also allow them to explore other literary and cultural traditions, both past and present. By immersing themselves in these other traditions, students gain insight into their own language and culture while deepening their understanding of what it means to be human, a central concern of the liberal arts.

The department provides students with linguistic and cultural skills that can be effectively applied in their chosen professions, as well. A major or minor in a foreign language prepares students for success in a variety of careers ranging from international business, education, law, and government service to social work, the ministry, translation, and medical professions.

## Learning Objectives

Students pursuing study in foreign languages and literatures will work toward the following objectives:

1. Students will attain a high level of language proficiency. In the modern languages, this proficiency includes reading, writing, listening, and speaking; in the classical languages, reading and writing.
Reading: Students will comprehend and interpret a variety of texts.
Writing: Students will write clearly and effectively in a variety of genres (e.g., narrative and persuasive essays, personal and business correspondence, and literary analysis).
Listening and Speaking: Students will communicate effectively with native speakers in both formal and informal verbal contexts.
2. Students will recognize important authors and literary movements and will analyze and appreciate key literary texts, thereby becoming critical readers of literature.
3. Students will demonstrate knowledge of and appreciation for the relevant culture, both past and present.
4. Students will find, evaluate, engage with, and correctly cite sources of information in both the target language and in English, mindful of how these sources support their own academic work.

## Foreign Languages Across the University

In addition to language majors and minors, the University offers a variety of programs that incorporate the study of a foreign language:

Certificate in Business Spanish
Chinese and Japanese Studies
Enhanced International Business in German
Global Service
International Business
International Economics and Cultural Affairs
Latin American and Latino Studies
Pre-Seminary Program
Secondary Education
Valparaiso International Engineering Program (VIEP) in China
Valparaiso International Engineering Program (VIEP) - French, German, and Spanish

## Study Abroad

Through University programs and affiliations, an opportunity to study abroad is afforded students of any of the foreign languages. Foreign language majors and minors are strongly encouraged to study abroad. See page 19 for details.

## Placement and Special Credit

Before beginning the study of a foreign language already studied in high school, students are required to take a placement examination administered by this department.

Students who wish to begin languages they have not studied before must register for course 101 of those languages. Those students must complete level 102 to fulfill the foreign language requirement.

Students who have completed Level II of a foreign language in high school and also place into 101 of that language may enroll in 101 for elective credit only, but must complete level 203 to fulfill the foreign language requirement.

Students who place directly into level 203 of a language shall receive 4 credit hours for level 102 and 4 credit hours for level 203 when they pass course 203 at Valparaiso University.

Students who place directly into level 204 or higher in a language shall receive 4 credit hours for level 102, 4 credit hours for level 203 and the credit hours for the course into which they have placed when they pass this latter course at Valparaiso University.

Students who have taken the equivalent of level 203 at another institution will not be awarded retroactive credit. However, they will have fulfilled their Valparaiso University foreign language requirement.

## Advanced Placement by Examination

It is possible to fulfill the Foreign Language General Education Requirement through the Advanced Placement Program of the College Entrance Examination Board or through the College Level Examination Program.

## Special Exceptions to Foreign Language Requirement

International students whose native language is not English and who are studying on a nonimmigrant visa are exempt from the Foreign Language General Education Requirement provided they fulfill the General Education Requirement in Humanities: Literature.

Members of the College of Adult Scholars and other nontraditional students who have completed Level II of a foreign language in high school (9-12) but have not studied that language for at least six full years may be allowed to count credit earned for level 101 toward the foreign language requirement. Students should consult with the dean of the Graduate School and Continuing Education.

## Degree

Completion of the degree requirements of the College of Arts and Sciences with a major in Classics, French, German, or Spanish leads to the Bachelor of Arts degree.

## Cooperative Education

Qualified students may participate in the Cooperative Education program, subject to the availability of suitable positions. During the time of their employment, students are financially reimbursed by the cooperating employer and also receive credit toward the Foreign Language major. Eligible students are normally junior or senior Foreign Language majors who have completed 12 credits beyond the third semester of their language with a cumulative grade point average of 3.00 in their foreign language courses. Cooperative Education may be repeated for up to a total of 12 credit hours, only 3 of which may be counted toward meeting the minimum requirements of the major. For further information, refer to Cooperative Education, College of Arts and Sciences, page 63, and consult the department chair.

## Approval of Schedules

All students who take a major or minor in the department and all students who plan to teach a foreign language must have their schedules approved by their Foreign Language advisors at registration. A list of specific courses required of teaching majors and minors is available from the chair of the Education Department.

## Chinese

Chinese Minor

## A minimum of 16 credit hours in Chinese

Note: EAST courses 109, 110, 209, 210, taken at the Hangzhou, China study center, and EAST 495 when the topic is Chinese Language study, may count toward the minor.

## Study Abroad Opportunities

Hangzhou Program is available fall semester only. See page 21 for details. Students considering study abroad should consult with the department chair and their academic advisor as early as possible.

## Valparaiso University International Engineering Program in China (VIEP in China)

Engineering students who wish to enhance their program with Chinese language study, study abroad, and an overseas cooperative education placement should see page 324 for details about the VIEP in China program.

## Chinese Courses

FLC 101 Beginning Chinese I 4 Cr .
Basic elements of modern Chinese (Mandarin), including the four tones, sentence structure, and some Chinese characters. May not be taken by students who have taken language study courses in China. Refer to foreign language credit policies stated beginning on page 144.

FLC 102 Beginning Chinese II 4 Cr .
Continuation of FLC 101. Prerequisite: FLC 101 or equivalent. May not be taken by students who have taken language study courses in China.

FLC 203 Intermediate Chinese I 4 Cr .
Development of FLC 101 and FLC 102, focusing on speaking, aural comprehension, reading, and writing. Emphasis on drills and discussion of readings. Introduction of simplified characters and cursive script. Continuously increasing use of Chinese in class. Prerequisite: FLC 102 or permission of the instructor.

FLC 204 Intermediate Chinese II 4 Cr .
Continuation of FLC 203, emphasizing development of speaking, aural comprehension, reading, and writing. Includes readings from a variety of sources including contemporary Chinese short stories, lectures, and newspapers. Class sessions conducted in Chinese as much as possible. Prerequisite: FLC 203 or permission of the instructor.

FLC 305 Advanced Chinese I 4 Cr .
Development of FLC 204. Emphasis on increasingly complex use of language. Develops skills in understanding authentic written and oral media as well as discourse-level speaking, and writing short texts. Prerequisite: FLC 204 or equivalent.

FLC 306

FLC 407 Fourth Year Chinese I
4 Cr .
(Also offered as CHST 607.) Development of advanced writing and presentation skills in Chinese. Using a variety of primary source materials including contemporary non-fiction essays and fictional works, students strengthen their grasp of different language registers, enhance their ability to summarize key information in lively and engaging ways, gain a better appreciation of Chinese literature and culture, and refine their ability to write in a variety of styles and genres for various occasions. Prerequisite: FLC 306, EAST 309/310, or permission of the instructor.

FLC 408 Fourth Year Chinese II 4 Cr .
(Also offered as CHST 608.) A continuation of FLC 407. Using a variety of primary source materials including contemporary non-fiction essays and fictional works, students focus on expanding their vocabulary into broad topical areas and applying their grasp of different language registers and rhetorical styles learned in FLC 407 to practical tasks. This includes summarizing short news items; describing the geographical setting, climate, and culture of places; and introducing their work experience and career interests in oral and written forms. Prerequisite: FLC 407, EAST 309/310, or permission of the instructor.

FLC 481

FLC 482
Advanced Chinese II 4 Cr .
Continuation of FLC 305, stressing increased mastery of all four skills, with input from a variety of authentic sources both written and oral. Prerequisite: FLC 305 or equivalent.
$\qquad$


## FLC 483

FLC 486

FLC 495

Cooperative Education in Chinese III 0.5-3 Cr. Continuation of FLC 481. Prerequisites: FLC 482 and approval of the chair of the department. S/U grade. May be repeated beyond 483 for additional credit.

Internship in Chinese
Cr. 1-4
Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of Chinese. May not be applied to a minor in Chinese. S/U grade only. Prerequisite: consent of the chair of the department.

Supervised Reading and Research in Chinese
1-4 Cr.
A guided study of Chinese language and literature. Prerequisites: FLC 204 or equivalent and consent of the chair of the department.

## Classics

## Classics Major

Choose one of two tracks:

| Classical Language and Literature Track |  |  |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| CLC 310 | Greek Civilization | 3 Cr . |
| CLC 311 | Roman Civilization | 3 Cr . |
| CLC 411 | Studies in Classical Epic or Classical Drama | 3 Cr . |
| One of the following language concentrations: |  |  |
| Greek (24 credits) |  |  |
| Latin (16 credits beyond FLL 203) |  |  |
| Classical Languages (16 credits of Greek and 8 credits of Latin beyond FLL 203) |  |  |
| Note: Stude many G courses seminar seminary | pursue a graduate program in Classics shoul courses as possible. Sixteen hours of Gre minimum recommendation for students in -seminary students should consult wit Department of Theology. |  |


| Classical Civilization Track |  |  |
| :---: | :---: | :---: |
| One of the following options: |  |  |
| The 101-102 sequence in either Latin or Greek |  |  |
| 4 credits in either language at the level of course $\mathbf{2 0 3}$ or above |  |  |
| $\mathbf{2 4}$ credits of Classical Civilization courses, which must include the following: |  |  |
| CLC 200 | Classical Literary Studies | 3 Cr . |
| CLC 220 | Introduction to Classical Archaeology | 3 Cr . |
| One course from the following options: |  |  |
| CLC 310 | Greek Civilization | 3 Cr . |
| CLC 311 | Roman Civilization | 3 Cr . |
| CLC 411 | Studies in Classical Epic or Classical Drama | 3 Cr . |
| Of the remaining 12 elective credits, as many as 6 may be taken in other departments. Approved courses are PHIL 275 and THEO 317. Other courses may be counted toward the major with prior permission of Classics section head and department chair. |  |  |

## Classics Minor

Choose one of two tracks:

| Classical Language and Literature Track |  |  |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| CLC 310 | Greek Civilization | 3 Cr . |
| CLC 311 | Roman Civilization | 3 Cr . |
| One of the following language concentrations: |  |  |
| Greek (16 credits) |  |  |
| Latin (8 credits beyond FLL 203) |  |  |
|  |  |  |
| Classical Civilization Track |  |  |
| 15 credits of Classical Civilization courses, which must include the following: |  |  |
| CLC 200 | Classical Literary Studies | 3 Cr . |
| CLC 220 | Introduction to Classical Archaeology | 3 Cr . |
| One course from the following options: |  |  |
| CLC 310 | Greek Civilization | 3 Cr . |
| CLC 311 | Roman Civilization | 3 Cr . |

## Teaching Programs

Students who plan to teach Latin in secondary schools with a major or minor in Classics should consult their departmental advisor and the Education Department for specific requirements.

## Scholarships

Special scholarships for Classics students include The Rev. and Mrs. Arthur L. Reinke and the Rev. and Mrs. Augustus Reinke Memorial Scholarship, the John and Dorothea Helms Endowed Scholarship, and the Delta Upsilon Chapter of Beta Sigma Phi Scholarships.

## Study Abroad Opportunities

- College Year in Athens (available fall only)
- American School of Classical Studies at Athens (available summer only)
- Archaeological Field Work (available summer only)
- Three-week guided study trips to Greece and Italy in alternate summers

See page 27 for details; students considering study abroad should consult with the department chair and their academic advisor as early as possible.

## Classics Courses

## CLC 200

CLC 220 Introduction to Classical Archaeology
3 Cr .
A study of classical archaeological sites including sculpture, painting, and architecture, and their relationship to political and cultural history. Field trip to a major museum. No knowledge of Greek or Latin required. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

CLC $250 \quad$ Classical Monuments in Context
3 Cr .
A travel course in which the study of Greek or Roman artistic expression takes place in a classical environment. Focus on archaeological sites and museum collections. Study trips will be conducted to Greece, Italy, or Roman Germany. May be repeated for credit if the trips are different. No knowledge of Greek or Latin required. Offered summers only. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

## CLC 321 Archaeological Practicum

1-3 Cr.
Student participation in an approved excavation of a classical site. Participants must receive some on-site instruction in excavation goals and methods. Two weeks' work will normally earn 1 credit. Formal report required. Prerequisites: FLGK 102 or FLL 102, CLC 220, either CLC 310 (HIST 310) or CLC 311 (HIST 311), and approval of department chair and excavation director.

Studies in Classical Epic or Classical Drama
3 Cr .
Close reading of selected epics by Homer, Apollonius, and Vergil or of selected plays by Aeschylus, Sophocles, Euripides, Aristophanes, Plautus, and Terence. Discussion of historical context, poetic technique, and the values and concerns that the works reflect. May be repeated for credit provided there is no duplication of material. No knowledge of Greek or Latin required. Prerequisite: either CLC 310 or 311 or instructor's approval.

CLC 481 Cooperative Education in Classical Civilization I 0.5-3 Cr.
Work experience with a cooperating employer. Prerequisites: 20 credits of work in CLC, including CLC 220 and either CLC 310 or CLC 311, and approval of department chair. S/U grade.

Continuation of CLC 481. Prerequisites: CLC 481 and approval of department chair. S/U grade. May be repeated beyond 483 for additional credit.

Supervised Reading and Research in Classical Civilization
Intended for students capable of doing independent study in Classical Civilization. Scholarly paper required. Prerequisite: Consent of department chair.

## French

## French Major (Minimum 27 Cr.)

| FLF 204 | French Composition and Conversation | 4 Cr. |
| :--- | :--- | :--- |
| FLF $\mathbf{2 2 0}$ | Approaches to French Literature | 3 Cr. |
| FLF $\mathbf{3 5 1}$ | French Texts and Society: From Feudalism to Humanism | 3 Cr . |
| FLF $\mathbf{3 5 2}$ | French Texts and Society: From Absolutism to Revolution | 3 Cr. |
| FLF $\mathbf{3 5 3}$ | French Texts and Society: From Romanticism to the Fifth Republic | 3 Cr. |
| FLF 493 | Senior French Seminar | 3 Cr. |

Eight additional credits in French beyond FLF 203.

## French Minor (Minimum 16 Cr.)

| FLF 204 | French Composition and Conversation | 4 Cr. |
| :--- | :--- | :--- |
| FLF 220 | Approaches to French Literature | 3 Cr. |

Nine additional credits in French beyond FLF 203. At least one course (three
credits) must be 300 -level or higher.

## Special Placement

Students who place directly into a course higher than level 204 need not complete level 204 but must complete all other requirements for the major or minor, including the required total of 27 credit hours (major) or 14 credit hours (minor).

## Teaching Programs

Students who plan to teach French in elementary, middle, or secondary schools with a major or minor in French should consult their departmental advisor and the Education Department for specific requirements.

## Valparaiso University International Engineering Program in French (VIEP - French)

Engineering students who wish to enhance their program with French language study, study abroad, and an overseas cooperative education placement should see page 323 for details about the VIEP - French program.

## Study Abroad Opportunities

- Paris Internship Program (available fall or spring semester)
- IES Abroad Nantes (available fall or spring semester)
- University of Cergy-Pontoise Exchange Program (available spring semester)
- La Rochelle International Business School (available spring semester)
- Université de Technologie de Compiègne Exchange Program (available full year only)

See the section beginning on page 23 for details; students considering study abroad should consult with the department chair and their academic advisor as early as possible.

## The Roger and Hazel Guillaumant Award

See page 33 for details.

## The Patterson MacLean Friedrich Scholarship

See page 33 for details.

## French Courses

| FLF $\mathbf{1 0 1}$ | Beginning French I <br> An introduction to French language and culture with emphasis on spoken and written communication skills. Refer <br> to foreign language credit policies stated beginning on page 144. |
| :--- | :--- |
| FLF $\mathbf{1 0 2 ~}$ | Beginning French II <br> A continuation of FLF 101. Prerequisite: FLF 101 or equivalent. |
| FLF $\mathbf{2 0 0}$ | French and Francophone Literary Studies <br> Study of selected works of French or Francophone literature in English translation. Readings represent significant <br> genres and literary periods presented in biographical, historical, and cultural context. The course provides <br> instruction and practice in the writing of careful critical analysis of the readings. May not be counted toward a <br> major or minor in French. May be used to fulfill the Humanities: Literature component of the General Education <br> Requirement. |

A consolidation of French language skills with emphasis on interpersonal, interpretive, and presentational communication. Students increase control of grammatical structures, broaden vocabulary, and become more familiar with French and Francophone cultures. Prerequisite: FLF 102 or equivalent.
FLF 204 French Composition and Conversation 4 Cr.

A review and expansion of French language skills with emphasis on interpersonal, interpretive, and presentational communication. Students refine grammatical accuracy, write on varied topics, participate in extensive oral practice, and read literature and other authentic texts while building on their understanding of French and Francophone cultures. Prerequisite: FLF 203 or equivalent. May be repeated for credit at the Paris Centers or similarly accredited programs.

FLF 220 Approaches to French Literature 3 Cr .
An introduction to the strategies of reading, interpreting, and writing about French literature. Reading and discussion of works from a variety of literary genres with particular attention to textual analysis (explication de texte). Some sections of this course may be used to fulfill the Writing Intensive General Education Requirement. Prerequisite: FLF 204.

An introduction to contemporary French culture and society, focusing on current institutions, issues, and events. Prerequisite: FLF 204.

French Phonetics
A study of the principles of French phonetics with special emphasis on the difficulties encountered by American students. Brief introduction to the history of the French language. Prerequisite: FLF 204.

## French Film Studies

3 Cr .
This course examines film as an artistic medium in the context of French cinema from its origins to the present. Taught in English, the course focuses on cultural and historical context, cinematic technique, and instruction in the practice of writing critical analyses of film. May not be counted toward a major or minor in French. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

French Conversation
1 Cr .
A course that develops spoken communication skills in French. May be repeated for elective credit, but counted toward a major or minor in French only once. Prerequisite: FLF 204.

FLF 271 French Play Production 1-3 Cr.
Rehearsal and performance of a play or excerpts of a play in French. No prior acting experience required. Prerequisite: FLF 203. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

A study of selected themes or issues in French or Francophone literature, language, or civilization. May be repeated for credit if the topic varies. Prerequisite: FLF 204

Topics in French and Francophone Cultures
A study of critical cultural contributions of France and the Francophone world. All work done in English. May be repeated for credit if the topic varies. May not be counted toward a major or minor in French. Prerequisite: Sophomore standing or above.

Advanced Oral Expression
3 Cr .
Development of advanced speaking and oral comprehension skills through intensive oral practice. Through discussion, role-play, debate, and other activities, students improve fluency, increase vocabulary, refine grammatical accuracy, and learn to use appropriate linguistic register. Prerequisite: FLF 204.

Advanced Written Expression 3 Cr
Development of advanced writing skills in French. Using a variety of source materials including film, fiction, and nonfiction writing, students develop vocabulary, improve grammatical accuracy, and refine their ability to write in a variety of styles and genres for various occasions. Prerequisite: FLF 204.

| FLF 306 | Contemporary French Language and Communication <br> This course develops advanced language skills and cultural knowledge through work with contemporary Frenchlanguage media, including newspapers, magazines, television, cinema, and the internet. Prerequisite: FLF 204. |
| :---: | :---: |
| FLF 307 | Professional French <br> A study of the French language as it is used in the international business world, including general commercial technology, correspondence, and the basic workings of French business. Prerequisite: FLF 204. |
| FLF 351 | French Texts and Society: From Feudalism to Humanism <br> An interdisciplinary survey of French literature and cultural history from the Middle Ages through the Renaissance. Culturally significant texts (literary, historical, philosophical, and artistic) are examined within the context of medieval and early modern French society. Prerequisite: FLF 220. |
| FLF 352 | French Texts and Society: From Absolutism to Revolution <br> An interdisciplinary survey of French literature and cultural history from the Classical Age through the end of the Ancien Régime. Culturally significant texts (literary, historical, philosophical, and artistic) are examined within the context of classicism and enlightenment in prerevolutionary French society. Prerequisite: FLF 220. |
| FLF 353 | French Texts and Society: From Romanticism to the Fifth Republic <br> An interdisciplinary survey of French literature and cultural history from the Napoleonic era to present. Culturally significant texts (literary, historical, philosophical, and artistic) are examined within the context of French society of the last two centuries. Prerequisite: FLF 220. |
| FLF 390 | Seminar in French <br> A study of selected themes or issues in French or Francophone literature, language, or civilization. May be repeated for credit if the topic varies. Prerequisite: FLF 220 or consent of the instructor. |
| FLF 481 | Cooperative Education in French I <br> Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond FLF 203 and approval of the chair of the department. S/U grade. |
| FLF 482 | Cooperative Education in French II Continuation of FLF 481. Prerequisites: FLF 481 and approval of the chair of the department. S/U grade. |
| FLF 483 | Cooperative Education in French III Continuation of FLF 481. Prerequisites: FLF 481 and approval of the chair of the department. S/U grade. May be repeated beyond 483 for additional credit. |
| FLF 486 | Internship in French <br> Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of French. May not be applied to a major or minor in French. S/U grade only. Prerequisite: consent of the chair of the department. |
| FLF 493 | Senior French Seminar <br> A senior-level capstone course which integrates knowledge and skills from previous French courses. Language skills (speaking, listening, writing, reading) are refined as depth and nuance are added to the understanding of French history, literature, culture and contemporary events. Prerequisites: senior standing and consent of the chair of the department. |
| FLF 495 | Supervised Reading and Research in French <br> Intended for students capable of doing independent study in French language, civilization, and literature. Prerequisite: consent of the chair of the department. |
| FLF 497 | Honors Work in French <br> See Honors Work, page 63. |
| FLF 498 | Honors Candidacy in French <br> See Honors Work, page 63. |

## German

## German Major (Minimum 27 Cr.)

| FLGR 204 | German Composition and Conversation | 4 Cr. |
| :--- | :--- | :--- |
| FLGR 220 | Approaches to German Studies | 3 Cr. |
| FLGR 351 | German Studies: The Middle Ages and Humanism | 3 Cr. |
| FLGR 352 | German Studies: Enlightenment and Revolution | 3 Cr. |
| FLGR 353 | German Studies: Constructing a Modern Nation | 3 Cr. |
| FLGR 493 | Senior German Seminar | $\mathbf{3 C r}$. |
| Eight additional credits in German beyond FLGR 203. |  |  |

## German Minor (Minimum 14 Cr.)

| FLGR 204 | German Composition and Conversation | 4 Cr. |
| :--- | :--- | :--- |
| FLGR 220 | Approaches to German Studies | 3 Cr. |

Seven additional credits in German beyond FLGR 203.

## Special Placement

Students who place directly into a course higher than level 204 need not complete level 204 but must complete all other requirements for the major or minor, including the required total of 27 credit hours (major) or 14 credit hours (minor).

## Teaching Programs

Students who plan to teach German in elementary, middle, or secondary schools with a major or minor in German should consult their departmental advisor and the Education Department for specific requirements.

## Enhanced International Business in German (EIB-German)

International Business students who wish to enhance their program with a German major, study abroad, and an overseas cooperative education placement should see page 294 for details about the EIB-German program.

## Valparaiso University International Engineering Program in German (VIEP - German)

Engineering students who wish to enhance their program with German language study, study abroad, and an overseas cooperative education placement should see page 323 for details about the VIEP - German program.

## Study Abroad Opportunities

- Reutlingen Program (available fall or spring semester)
- Rottenburg am Neckar (available spring semester only)
- Tübingen Program (available full year only)

See page 20 for details; students considering study abroad should consult with the department chair and their academic advisor as early as possible.

## The Walther M. Miller Memorial Prize

See page 34 for details.

## Thora Moulton Prize

See page 33 for details.
Also available for select upper class students: Reutlingen Semester Scholarship, Tübingen Orientation Scholarship, and Giebel Scholarship.

## German Courses

FLGR 101 Beginning German I 4 Cr . An introduction to German language and culture with emphasis on spoken and written communication skills. Refer to foreign language credit policies stated beginning on page 144.

German in the Media
3 Cr .
A study of German language and contemporary society through the media, including newspapers, magazines, radio, television, film, and the internet. Advanced communication skills are developed. Prerequisite: FLGR 204.

FLGR $341 \quad$ History of the German Language
3 Cr
A historical study of the development of the German language. Students are introduced to the basics of linguistics, to linguistic change from Indo-European to the present, and to contemporary dialect variation in German. Prerequisite: FLGR 220.

German Studies: The Middle Ages and Humanism
A study of German-language literature and culture from the emergence of the Holy Roman Empire of the German Nation to Luther and the early modern era. Intellectual and aesthetic works (e.g., architecture, art, drama, music, philosophy, poetry, prose fiction) are examined in cultural historical context. Prerequisite: FLGR 220.

A study of German-language literature and culture from the beginnings of the modern era to the failed revolution of 1848. Intellectual and aesthetic works (e.g., architecture, art, drama, music, philosophy, poetry, prose fiction) are examined in cultural-historical context. Prerequisite: FLGR 220.

FLGR 353 German Studies: Constructing a Modern Nation 3 Cr.
A study of German-language literature and culture from the emergence of the first unified German nation-state in the nineteenth century to the present. Intellectual and aesthetic works (e.g., architecture, art, drama, music, philosophy, poetry, prose fiction) are examined in cultural-historical context. Prerequisite: FLGR 220.

FLGR 390 Seminar in German 3 Cr .
A study of selected themes or issues in German literature, language, or civilization. May be repeated for credit if the topic varies. Prerequisite: one course from the following: FLGR 351, FLGR 352, or FLGR 353.

FLGR 481 Cooperative Education in German I 0.5-3
Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond FLGR 203 and approval of the chair of the department. S/U grade.

FLGR 482 Cooperative Education in German II 0.5-3 Cr.
Continuation of FLGR 481. Prerequisites: FLGR 481 and approval of the chair of the department. S/U grade.
FLGR 483 Cooperative Education in German III 0.5-3 Cr.
Continuation of FLGR 481. Prerequisites: FLGR 481 and approval of the chair of the department. S/U grade. May be repeated beyond 483 for additional credit.

FLGR 486 Internship in German 1-4 Cr.
Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of German. May not be applied to a major or minor in German. S/U grade only. Prerequisite: consent of the chair of the department.

FLGR 493 Senior German Seminar
3 Cr .
A senior-level capstone course which integrates knowledge and skills from previous German courses. Language skills (speaking, listening, writing, reading) are refined as depth and nuance are added to the understanding of German history, literature, culture and contemporary events. Prerequisites: senior standing and consent of the chair of the department.

FLGR 495 Supervised Reading and Research in German
1-4 Cr.
Intended for students capable of doing independent study in German language, civilization, and literature. Research paper required. Prerequisite: consent of the chair of the department.

| FLGR 497 | Honors Work in German <br>  <br> See Honors Work, page 63. | 3 Cr. |
| :--- | :--- | :--- |
| FLGR 498 | Honors Candidacy in German <br> See Honors Work, page 63. | 3 Cr. |

## Greek

See Classics for description of Greek concentration in Classics major and minor.

## Greek Courses

FLGK 101 First Semester Greek 4 Cr . A course designed to give the student the essentials needed to read ancient Greek and to provide a brief introduction to Greek literature and culture. Refer to foreign language credit policies stated beginning on page 144.

A continuation of FLGK 101 with readings from Classical and/or New Testament authors. Prerequisite: FLGK 101 or equivalent.

Reading and analysis of selections from Classical and/or biblical authors with a review of grammatical forms and syntax; parallel study of pertinent aspects of Greek civilization. Prerequisite: FLGK 102 or equivalent.

## FLGK 320

FLGK 410

FLGK 411

FLGK 495

FLGK 497 Honors Work in Greek
See Honors Work, page 63.
FLGK 498 Honors Candidacy in Greek
See Honors Work, page 63.

## Hebrew

## Hebrew Courses

FLH 101 First Semester Hebrew 4 Cr .
Elements of Hebrew grammar stressing oral and reading ability. Refer to foreign language credit policies stated beginning on page 144.

Second Semester Hebrew
4 Cr.
A continuation of FLH 101, with reading of simpler prose sections of the Old Testament. Prerequisite: FLH 101 or equivalent.

## FLH 495

Supervised Reading and Research in Hebrew
1-2 Cr.
Intended for students who wish to pursue study in Hebrew language and literature beyond the first-year sequence of FLH 101-102. Content can be tailored to student objectives, including readings in Biblia Hebraica and other classical Hebrew texts, study of advanced grammar and syntax, and/or original research into the Hebrew language and literature. Prerequisite: FLH 102 or consent of the chair of the department.

## Japanese

## Japanese Minor (Minimum 16 Cr.)

## A minimum of 16 credit hours in Japanese

## Study Abroad Opportunities

- Kansai Gaidai Program (available fall and/or spring semesters)

See page 24 for details. Students considering study abroad should consult with the department chair and their academic advisor as early as possible.

## Japanese Courses

| FLJ 101 | Beginning Japanese I 4 Cr. |
| :---: | :---: |
|  | An introduction to the basic grammar of Japanese. Refer to foreign language credit policies stated beginning on page 144. |
| FLJ 102 | Beginning Japanese II 4 Cr. |
|  | A continuation of FLJ 101. Prerequisite: FLJ 101 or equivalent. |
| FLJ 200 | Japanese Literary Studies 3 Cr. |
|  | Study of selected works of Japanese literature in English translation. Readings represent significant genres and literary periods presented in biographical, historical, and cultural context. The course provides instruction and practice in the writing of careful critical analysis of the readings. May not be counted toward a minor in Japanese. Fulfills the Humanities: Literature component of the General Education Requirement. |
| FLJ 203 | Intermediate Japanese I 4 Cr. |
|  | Reading, writing, and discussion in Japanese on the intermediate level, with a review of Japanese grammar. Prerequisite: FLJ 102 or equivalent. |
| FLJ 204 | Intermediate Japanese II 4 Cr. |
|  | A continuation of FLJ 203. Prerequisite: FL 203 or equivalent. |
| FLJ 250 | Topics in Japanese Literature and the Fine Arts 3 Cr. |
|  | Study of selected works of Japanese literature in English translation and of their correlates in the visual arts and/or music. No knowledge of Japanese required. The topic Japanese Poetry and Calligraphy may be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirement. |
| FLJ 305 | Advanced Japanese I 4 Cr. |
|  | Continuation of FLJ 204. Introduction of extended prose readings. Simple conversation in everyday Japanese. Prerequisite: FLJ 204 or equivalent. |
| FLJ 306 | Advanced Japanese II 4 Cr. |
|  | Continuation of FLJ 305. Emphasis on syntax of prose texts; review of grammar. Conversation in everyday Japanese. Composition in the expository style. Prerequisite: FLJ 305 or equivalent. |
| FLJ 322 | Readings in Modern Japanese Literature 3 Cr. |
|  | Readings in a variety of fictional works by twentieth-century authors in the original Japanese. Discussion of themes and narrative techniques; emphasis on skills required in the study of literary texts. Prerequisite: FLJ 305 or consent of the instructor. |
| FLJ 481 | Cooperative Education in Japanese I 0.5-3 Cr. |
|  | Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond FLJ 203 and approval of the chair of the department. S/U grade. |
| FLJ 482 | Cooperative Education in Japanese II 0.5-3 Cr. |
|  | Continuation of FL 481. Prerequisites: FLJ 481 and approval of the chair of the department. S/U grade. |
| FLJ 483 | Cooperative Education in Japanese III 0.5-3 Cr. |
|  | Continuation of FLJ 481. Prerequisites: FL 481 and approval of the chair of the department. S/U grade. May be repeated beyond 483 for additional credit. |
| FLJ 486 | Internship in Japanese 1-4 Cr. |
|  | Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of Japanese. May not be applied to a minor in Japanese. S/U grade only. Prerequisite: consent of the chair of the department. |
| FLJ 495 | Supervised Reading and Research in Japanese $\quad$ 1-4 Cr. |
|  | Intended for students capable of doing independent study in Japanese language, civilization, and literature. Research paper required. Prerequisite: consent of the chair of the department. |

## Latin

See Classics for description of Latin concentration in Classics major and minor.

## Teaching Programs

Students who plan to teach Latin in secondary schools should consult the chair of the department and the Education Department for specific requirements.

## Latin Courses

| FLL 101 | First Semester Latin <br> A course designed to give the student the essentials of Latin and to provide a brief introduction to Roman literature and culture. Refer to foreign language credit policies stated beginning on page 144. |
| :---: | :---: |
| FLL 102 | Second Semester Latin <br> A continuation of FLL 101, followed by easy selections from Latin prose. Prerequisite: FLL 101 or equivalent. |
| FLL 203 | Intermediate Latin <br> A course designed to review and refine knowledge of basic grammar and syntax, to introduce reading and composition, and to study pertinent aspects of Roman life and history. Prerequisite: FLL 102 or equivalent. |
| FLL 204 | Vergil Readings from the works of Vergil and an introduction to Vergilian scholarship. Prerequisite: FLL 203 or equivalent. |
| FLL 410 | Latin Poetry <br> A study of a major poet, genre, or period. This course may be repeated provided there is no duplication of material. Prerequisite: FLL 203 or equivalent. |
| FLL 411 | Latin Prose <br> A study of a major author, genre, or period, or of prose composition. This course may be repeated provided there is no duplication of material. Prerequisite: FLL 203 or equivalent. |
| FLL 495 | Supervised Reading and Research in Latin <br> Intended for students capable of doing independent study in Latin language and literature. Scholarly paper required. Prerequisite: consent of the chair of the department. |
| FLL 497 | Honors Work in Latin <br> See Honors Work, page 63. |
| FLL 498 | Honors Candidacy in Latin <br> See Honors Work, page 63. |

## Spanish

## Spanish Major (Minimum 27 Cr.)

| FLS 204 | Spanish Composition and Conversation | 4 Cr. |
| :--- | :--- | :--- |
| FLS 220 | Selected Readings in Hispanic Literature | 4 Cr. |
| FLS 230 | Spanish Civilization | 4 Cr. |
| $\underline{\text { OR FLS 231 }}$ | Spanish-American Civilization | 4 Cr. |
| FLS 321 | Spanish Literature | 3 Cr. |
| $\underline{\text { OR }}$ FLS 322 | Spanish American Literature | 3 Cr. |
| FLS 493 | Senior Spanish Seminar | $\mathbf{3 C r}$ |
| Nine additional credits in Spanish beyond FLS 203. |  |  |

## Spanish Minor (Minimum 14 Cr.)

| FLS 204 | Spanish Composition and Conversation | 4 Cr . |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| FLS 220 | Selected Readings in Hispanic Literature | 4 Cr . |
| FLS 230 | Spanish Civilization | 4 Cr . |
| FLS 231 | Spanish-American Civilization | 4 Cr . |
| Six additional credits in Spanish beyond FLS 203; at least one course at the $\mathbf{3 0 0}$ level or higher |  |  |

## Special Placement

Students who place directly into a course higher than level 204 need not complete level 204 but must complete all other requirements for the major or minor, including the required total of 27 credit hours (major) or 14 credit hours (minor).

## Teaching Programs

Students who plan to teach Spanish in secondary schools with a major or minor in Spanish should consult their departmental advisor and the Education Department for specific requirements.

## Valparaiso International Engineering Program in Spanish (VIEP - Spanish)

Engineering students who wish to enhance their program with Spanish language study, study abroad, and an overseas cooperative education placement should see page 324 for details about the VIEP - Spanish program.

## Study Abroad Opportunities

- Granada, Spain (available fall semester or for the full year but not for the spring semester)
- Zaragoza, Spain (available fall, spring, or full year)
- Puebla, México (available fall, spring, or full year)
- Viña del Mar, Chile (available fall, spring, or full year)
- San José, Costa Rica (available fall, spring, or full year)

See the section beginning on page 22 for details; students considering study abroad should consult with the department chair and their academic advisor as early as possible.

## Spanish Courses

FLS 101 Beginning Spanish I 4 Cr .
An introduction to Spanish language and Hispanic cultures with emphasis on spoken and written communication skills. Refer to foreign language credit policies stated beginning on page 144.

FLS 102 Beginning Spanish II 4 Cr .
A continuation of FLS 101. Prerequisite: FLS 101 or equivalent.
FLS 200 Hispanic Literary Studies 3 Cr.

Study of selected works of Spanish language literature in English translation. Readings represent significant genres and literary periods presented in biographical, historical, and cultural context. The course provides instruction and practice in the writing of careful critical analysis of the readings. May not be counted toward a major or minor in Spanish. Fulfills the literature component of the Humanities General Education Requirement.

FLS 203 Intermediate Spanish 4 Cr.
A consolidation of Spanish language skills with emphasis on interpersonal, interpretive, and presentational communication. Students increase control of grammatical structures, broaden vocabulary, and become more familiar with Hispanic cultures. Prerequisite: FLS 102 or equivalent.

FLS 204 Spanish Composition and Conversation 4 Cr.
A review and expansion of Spanish language skills with emphasis on interpersonal, interpretive, and presentational communication. Students refine grammatical accuracy, write on varied topics, participate in extensive oral practice, and read literature and other authentic texts while building on their understanding of Hispanic cultures. Prerequisite: FLS 203 or equivalent.

FLS 220
Selected Readings in Hispanic Literature
4 Cr.
The reading and discussion of works of Hispanic literature representative of various literary genres, with emphasis on the techniques of literary analysis. Some sections of this course may be used to fulfill the Writing Intensive General Education Requirement. Prerequisite: one of FLS 204, FLS 230, or FLS 231.

| FLS 230 | Spanish Civilization 4 Cr. |
| :---: | :---: |
|  | A course intended to further the student's knowledge of the varied elements of Spanish history and culture. Lectures and individual oral participation in Spanish. Prerequisite: one of FLS 204, FLS 220, or FLS 231. |
| FLS 231 | Spanish American Civilization 4 Cr. |
|  | A course intended to further the student's knowledge of the varied elements of Spanish American history and culture. Lectures and individual oral participation in Spanish. Prerequisite: one of FLS 204, FLS 220, or FLS 230. |
| FLS 290 | Topics in Spanish 3 Cr . |
|  | A study of selected themes or issues in the literature, civilization, or language of the Spanish-speaking world. May be repeated for credit if the topic varies. Prerequisite: FLS 204. |
| FLS 303 | Advanced Communication in Spanish 3 Cr. |
|  | Students work toward mastery of the more difficult aspects of Spanish grammar. Intensive practice in oral and written expression provides the opportunity to advance students' abilities to communicate effectively in a variety of personal and professional settings. Prerequisite: FLS 220, FLS 230, or FLS 231. |
| FLS 306 | Contemporary Hispanic Society through Communications 3 Cr . |
|  | Latin American and Spanish newspapers, magazines, radio, television, and films are used to build more advanced language skills and to familiarize the student with the modern-day Hispanic world. Prerequisite: one of FIS 220, FLS |
|  | 230 or FLS 231. |
| FLS 307 | Professional Spanish 3 Cr. |
|  | A study of the Spanish language as it is used in the international business world, including writing of business letters and general commercial terminology. Prerequisite: one of FLS 220, FLS 230, or FLS 231. |
| FLS 308 | Spanish for Service Professionals 3 Cr. |
|  | Designed for students intending to use Spanish in the service professions (medicine, social work, education, church work, etc.). Students learn discipline-related vocabulary, expand content knowledge in relevant service fields, and polish their Spanish-language skills. Prerequisite: FLS 220, FLS 230, or FLS 231. |
| FLS 321 | Spanish Literature 3 Cr . |
|  | A study of representative works of the literature of Spain from the Middle Ages to the present. Prerequisite: FLS 220. |
| FLS 322 | Spanish American Literature 3 Cr . |
|  | A study of representative works of the literature of Spanish America from the Encounter to the present. Prerequisite: FLS 220. |
| FLS 390 | Seminar in Spanish 3 Cr. |
|  | A study of selected themes or issues in Spanish or Spanish American literatures, language, or civilization. May be repeated for credit if the topic varies. Prerequisite: one of FLS 220, FLS 230, or FLS 231. |
| FLS 481 | Cooperative Education in Spanish I 0.5-3 Cr. |
|  | Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond FLS 203 and approval of the chair of the department. S/U grade. |
| FLS 482 | Cooperative Education in Spanish II 0.5-3 Cr. |
|  | Continuation of FLS 481. Prerequisites: FLS 481 and approval of the chair of the department. S/U grade. |
| FLS 483 | Cooperative Education in Spanish III 0.5-3 Cr. |
|  | Continuation of FLS 481. Prerequisites: FLS 481 and approval of the chair of the department. S/U grade. May be repeated beyond 483 for additional credit. |
| FLS 486 | Internship in Spanish 1-4 Cr. |
|  | Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of Spanish. May be applied to a major or minor in Spanish. Prerequisite: consent of the department chair. |
| FLS 493 | Senior Spanish Seminar 3 Cr. |
|  | A senior-level capstone course which integrates knowledge and skills from previous Spanish courses. Language skills (speaking, listening, writing, reading) are refined as depth and nuance are added to the understanding of Hispanic history, literature, culture and contemporary events. Prerequisites: FLS 220, senior standing, and consent of the chair of the department. |

FLS 495

Supervised Reading and Research in Spanish
Intended for students capable of doing independent study in Hispanic language, civilization, or literature. Research paper required. Prerequisite: consent of the chair of the department.

Honors Work in Spanish
See Honors Work, page 63.
Honors Candidacy in Spanish
3 Cr .
See Honors Work, page 63.


## Geography and Meteorology

Learn more about the Department of Geography and Meteorology at Valpo online.


Professors Janke, Kilpinen, Longan, Wolf; Associate Professors Bals-Elsholz (chair), C. Clark, Ganesh Babu, Goebbert; Instructor Stepanek.

## Geography

Geography studies the Earth and its diverse people and environments. It seeks to understand how humans perceive and transform places and landscapes around the world. Geographers also explore and analyze the spatial organization of natural and social phenomena by creating and analyzing maps with computerized geographic information systems (GIS). Geography students learn to integrate knowledge from the natural sciences, social sciences, and humanities in order to understand humanity's relationship with the Earth. Geography uniquely combines a strong liberal arts education with marketable professional skills.

The major integrates dynamic classroom instruction with field and professional experience to prepare students for a wide variety of careers. Students completing the major may go on to careers in environmental management, urban planning, geospatial technology, cartography, location planning, real estate, tourism, marketing, demography, natural disaster preparation and recovery, international business, emergency management, social studies education, or earth science education to name just a few areas. Combining geography with a second major or pursuing graduate study in geography can enhance a student's opportunities. Geography majors also pursue graduate study in other areas including urban planning, architecture, landscape architecture, environmental science, resource management, climatology, oceanography, geology, archaeology, anthropology, law, or medicine.

The Geography major at Valparaiso University emphasizes practical experience through field trips, field courses, internships, and opportunities to work with faculty on original research. Students taking physical geography courses regularly visit the nearby Indiana Dunes National Park to learn about dune formation and biodiversity. Students studying urban geography and planning take a short train ride into Chicago to experience the dynamism of the downtown Loop and to observe everyday life in its diverse neighborhoods. In field courses, students use the environment as their classroom; learning about glacial processes while hiking on a glacier in Alaska or about natural hazards by visiting volcanoes in Hawaii. Most geography students complete a paid or unpaid internship with national parks, urban planning agencies, Indian reservations, environmental organizations, non-profit organizations,
and businesses. Many geography students also complete one of Valparaiso University's study abroad programs or the Chicago Urban Studies program. Motivated students may arrange to work with a faculty member on original research problems or work as a lab assistant for physical geography and GIS courses.

Outside the classroom, students share their love for geography through the Geography Club, which organizes professional and social activities, weekend field excursions, and guest speakers. Students who distinguish themselves by high scholarship may be elected to membership in Gamma Theta Upsilon, the international geography honor society. The Alpha Xi Chapter of Gamma Theta Upsilon was installed at Valparaiso University in 1950.

The geography program at Valparaiso University has access to state-of-the-art facilities including the F.P. Kallay Geographic Applications Laboratory, an extensive map library located in the Christopher Center, and media-equipped classrooms in KallayChristopher Hall.

## Bachelor of Arts - Geography Major (Minimum 30 Cr.)

Geography courses are chosen by the student in consultation with his or her advisor and must include the following:

## Two 100-level courses

Two 200-level courses
Four 300-level (or higher) courses
Within the geography major, students may focus their studies further by selecting one of the following concentrations: Cartography and Geographic Information Systems (GIS) Environmental Geography Urban Geography and Regional Planning Human/Cultural Geography
Note: The department maintains detailed information sheets on these concentrations, including course listings, internship recommendations, and career options at its website http://www.valpo.edu/geographymeteorology/geography/. Contact the chair of the department for details.

| GEO 101 | World Human Geography | 3 Cr . |
| :---: | :---: | :---: |
| GEO 102 | Globalization and Development | 3 Cr . |
| GEO 104 | Introduction to Geomorphology | $2+4,4 \mathrm{Cr}$. |
| GEO 215 | Introduction to Geographic Information Systems | $3+2,4 \mathrm{Cr}$. |
| GEO 260 | Environmental Conservation | 3 Cr . |
| GEO 280 | Geography of Cyberspace | 3 Cr . |
| MET 103 | Introduction to Meteorology | $3+2,4 \mathrm{Cr}$. |
| One of the following courses: |  |  |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| GEO 470 | Political Geography | 3 Cr . |
| One of the following courses: |  |  |
| GEO 320 | Urban Geography | 3 Cr . |
| GEO 420 | Rural Geography | 3 Cr . |
| One of the following courses: |  |  |
| GEO 365 | Biogeography | 3 Cr . |
| GEO 385 | Field Study | 0+4, 1-3 Cr. |
| GEO 404 | Advanced Geomorphology | $2+4,4 \mathrm{Cr}$. |
| One of the following courses: |  |  |
| GEO 474 | Historical Geography of the United States | 3 Cr . |
| GEO 475 | Culture, Nature, Landscape | 3 Cr . |
| Additional courses required: |  |  |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| HIST 110 | The World in the Twentieth Century | 3 Cr . |
| POLS 120 | The Government of the United States | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |

## Bachelor of Science - Geography Major (Minimum 37 Cr.)

| Environmental Core |  | 22 Cr . |
| :---: | :---: | :---: |
| GEO 104 | Introduction to Geomorphology | 2+4, 4 Cr . |
| GEO 215 | Introduction to Geographic Information Systems | 3+2, 4 Cr . |
| GEO 365 | Biogeography | 3 Cr . |
| GEO 404 | Advanced Geomorphology | 2+4, 4 Cr. |
| MET 103 | Introduction to Meteorology | $3+2,4 \mathrm{Cr}$. |
| MET 215 | Climatology | 2+2, 3 Cr . |
| Geographic Tools |  | 6 Cr . |
| Two of the following courses: |  |  |
| GEO 225 | Digital Cartography and GPS | 2+2, 3 Cr . |
| GEO 230 | Introduction to Remote Sensing | 3 Cr . |
| GEO 415 | Advanced Geographic Information Systems | 3 Cr . |
| GEO 430 | Advanced Remote Sensing | 3 Cr . |
| GEO 460 | Data Analysis | 3 Cr . |
| Professional Experie |  | 3 Cr . |
| One of the following courses: |  |  |
| GEO 385 | Field Study in Geography | 0+4, 1-3 Cr. |
| GEO 486 | Internship in Geography | 3 Cr . |
| MET 385 | Field Study in Meteorology | 3 Cr . |
| Electives |  | 6 Cr . |
| Two of the following courses: |  |  |
| GEO 101 | World Human Geography | 3 Cr . |
| GEO 204 | National Parks | 3 Cr . |
| GEO 240 | Introduction to Climate Change | 3 Cr . |
| GEO 260 | Environmental Conservation | 3 Cr . |
| GEO 285 | Natural Hazards | 2+2, 3 Cr . |
| GEO 490 | Selected Topics in Geography | 1-3 Cr. |
| GEO 495 | Independent Study | 1-4 Cr. |
| MET 216 | Introduction to Meteorological Observation and Analysis | 3 Cr . |
| MET 319 | Tropical Meteorology | 3 Cr . |
| An addition | al Geographic Tools or Professional Experience course | 3 Cr . |
| Additional courses required: |  |  |
| MATH 131 | Calculus I | 3+2, 4 Cr . |

Note: Students opting for a science minor or second major to complete this B.S. degree must select a program from outside the Department of Geography and Meteorology.

## Geography Minor (Minimum 16 Cr.)

Geography courses are chosen by the student in consultation with his or her advisor and must include the following:

## One 100-level course

One 200-level course
Two 300-level (or higher) courses

## Geographic Information Systems Minor (Minimum 16 Cr.)

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| GEO 101 | World Human Geography | 3 Cr . |
| GEO 104 | Introduction to Geomorphology | $2+4,4 \mathrm{Cr}$. |
| GEO 215 | Introduction to Geographic Information Systems | $3+2,4 \mathrm{Cr}$. |
| GEO 230 | Introduction to Remote Sensing | 3 Cr . |
| GEO 415 | Advanced Geographic Information Systems | 3 Cr . |
| Three credits from the following options: |  |  |
| GEO 225 | Digital Cartography and GPS | 2+2, 3 Cr . |
| GEO 285 | Natural Hazards | $2+2,3 \mathrm{Cr}$. |
| GEO 430 | Advanced Remote Sensing | 3 Cr . |
| GEO 486 | Internship in Geography. | 1-6 Cr. |

Note: If selecting GEO 486, the internship must involve GIS, remote sensing, or cartography.

## American Indian Studies Minor (Minimum 16 Cr.)

| One 100-level Geography course |  |  |
| :---: | :---: | :---: |
| Six credits from the following options: |  |  |
| GEO 200 | American Ethnic Geography | 3 Cr . |
| GEO 274 | North American Indian on Film | 3 Cr . |
| GEO 490 | Selected Topics in Geography | 1-3 Cr. |
| Six credits from the following options: |  |  |
| GEO 385 | Field Study | 0+4, 1-3 Cr. |
| GEO 474 | Historical Geography of the United States | 3 Cr . |
| GEO 486 | Internship in Geography | 1-6 Cr. |

Because geography offers undergraduate students excellent opportunities to develop their professional skills through course work, field study, and internships, the department maintains information sheets on geography as a second major or minor tailored specifically to disciplines such as biology, civil engineering, business, foreign language, history, sociology/anthropology, and political science. The Kallay Laboratory is designed to facilitate research and teaching in the area of computerized geographic analysis, including GIS, remote sensing, and cartography. Other courses analyzing ethnic relations and global cultures will strengthen student interests in the humanities and social sciences. Contact the chair of the department for more information or visit the department's web page at http://www.valpo.edu/geography-meteorology.

## Meteorology

The atmospheric science course of study at Valparaiso University leads to a Bachelor of Science degree in Meteorology. The science of meteorology draws heavily on the fields of mathematics, physics, computer science, and chemistry. As such, students should possess a strong mathematics and science background. The required major courses prepare every student in the foundations of atmospheric science. The elective courses reflect the diverse nature of the science, enrich each student's academic experience, and prepare them for post-graduate careers.

The job market in meteorology, like the field itself, is rich and diverse. Many graduates enter employment with airlines, private forecasting and environmental consulting firms, or the National Weather Service. Others pursue professional opportunities with the U.S. Air Force through the University's Air Force ROTC program (see page 384). Still others pursue careers in research and academia, which require graduate training. Valparaiso University graduates have gone on to many of the finest meteorology graduate programs in the country.

Broadcast meteorology represents another promising career sector, and many meteorology graduates have achieved success in this field. There is considerable demand nationwide for trained professionals able to communicate meteorological information effectively and accurately, either through the broadcast media (cable, television, and radio) or in association with various consulting firms. Students prepare for this field through hands-on training and experience in broadcasting in the VUTV studios in Schnabel Hall and through internships at a variety of broadcast stations across the country, including WGN-TV in Chicago. Those interested in careers in broadcast meteorology should complete a Bachelor of Science degree in meteorology and a Digital Media Minor through the Department of Communication (see page 95).

Students interested in extracurricular learning opportunities are encouraged to participate in the student chapter of the American Meteorological Society/National Weather Association, with the Valparaiso University Storm Intercept Team (VUSIT), and avail themselves of the program's field course opportunities, including the Severe Convective Storms Field Study. The local chapter of Chi Epsilon Pi meteorology honor society promotes excellence and further training in meteorology. Internships and cooperative education experiences are also available to qualified students. The department maintains a high-tech weather center with individual work stations, access to UNIDATA and GEMPAK analysis tools and data retrieval, as well as to the department's instrumentation data sets for Valparaiso University's dual polarization Doppler radar, weather instrumentation tower, and radiosonde launching system.

Bachelor of Science - Meteorology Major (Minimum 32 Cr .)

| MET 103 | Introduction to Meteorology | $3+2,4 \mathrm{Cr}$. |
| :---: | :---: | :---: |
| MET 130 | Weather Technology | 3 Cr . |
| MET 215 | Climatology | 2+2,3 Cr . |
| MET 216 | Introduction to Meteorological Observation and Analysis | 3 Cr . |
| MET 369 | Atmospheric Thermodynamics | 3 Cr . |
| MET 372 | Atmospheric Dynamics I | $3+2,4 \mathrm{Cr}$. |
| MET 373 | Atmospheric Dynamics II | $3+2,4 \mathrm{Cr}$. |
| MET 480 | Synoptic Scale Analysis and Forecasting | $3+2,4 \mathrm{Cr}$. |
| MET 481 | Mesoscale Analysis and Forecasting | $3+2,4 \mathrm{Cr}$. |
| Additional Required Courses |  |  |
| PHYS 141 | Newtonian Mechanics | 3+0, 3 Cr . |
| PHYS 141L | Experimental Physics I | 0+3, 1 Cr . |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| MATH 132 | Calculus II | $3+2,4 \mathrm{Cr}$. |
| MATH 253 | Calculus III | 4 Cr . |
| MATH 260 | Linear Systems and Matrices | 1 Cr . |
| MATH 270 | Ordinary Differential Equations | 3 Cr . |

## Progression

In order to remain in the major, students must maintain a combined minimum grade point average of 2.30 in all Valparaiso University meteorology courses and in those mathematics and physics courses required for meteorology. Students will be reviewed initially at the end of their second semester on campus and each academic year thereafter.

## Meteorology Minor (Minimum 16 Cr .)

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| MET 103 | Introduction to Meteorology | $3+2,4 \mathrm{Cr}$. |
| MET 190 | Topics in Weather and Climate | $3+2,4 \mathrm{Cr}$. |
| MET 215 | Climatology | 2+2, 3 Cr . |
| MET 216 | Introduction to Meteorological Observation and Analysis | 3 Cr . |
| Two courses from the following options ${ }^{1}$ : |  |  |
| MET 130 | Weather Technology | 3 Cr . |
| MET 240 | Introduction to Climate Change | 3 Cr . |
| MET 271 | Aviation Meteorology | 3 Cr . |
| MET 279 | Severe Storm Prediction and Nowcasting | 3 Cr . |
| MET 319 | Tropical Meteorology | 3 Cr . |
| MET 350 | Boundary Layer Meteorology | 3 Cr . |
| MET 430 | Numerical Weather Prediction | 3 Cr . |
| MET 435 | Radar Meteorology | 3 Cr . |
| MET 440 | Global Climate Change | 3 Cr . |

## Degree

Completion of the degree requirements of the College of Arts and Sciences with a major in Geography or Geography Education leads to the Bachelor of Arts degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Geography, or Meteorology leads to the Bachelor of Science degree.

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## Geography

## Social Science Courses

The following courses may be used to fulfill part of the Social Science component of the General Education Requirements. No course can meet more than one General Education Requirement.

## GEO 101 World Human Geography 3 Cr .

A topical introduction to the many themes and subfields of human geography, especially population, economic, cultural, urban, and political geography. Examples highlighting these themes draw from relevant contemporary events in both the industrialized and developing worlds. May be used to partially fulfill the Social Science component of the General Education requirements.

GEO 102 Globalization and Development 3 Cr.
A regional survey of the developing countries, with an emphasis on their economic, social, and political development in the context of growing global interconnectedness. The course will explore issues of colonization, cultural change, ethnic conflict, and environmental modification. May be used to fulfill the Cultural Diversity course component of the General Education Requirements or to partially fulfill the Social Science component of the General Education requirements.

American Ethnic Geography
3 Cr .
An analysis of the rich ethnic diversity of the United States, including the immigration and regional settlement of each of the major cultural groups and their physical expression on the North American Landscape. Topical themes include language, religion, politics, and urban imprints. May be used to fulfill the Cultural Diversity course component of the General Education Requirements or to partially fulfill the Social Science component of the General Education requirements.

Economic Geography
3 Cr .
An analysis of the location of economic activities as parts of a system. May be used to partially fulfill the Social Science component of the General Education requirements. Prerequisite: sophomore standing or above.

North American Indian on Film
Through history, plays, novels, and film, this course helps us to understand distinctive features of Native American life as understood by Native Americans. It dispels common myths about Native Americans, examines the struggle of different tribes to maintain their identities, and provides insights into their values and religious beliefs. May be used to fulfill the Cultural Diversity course component of the General Education Requirements or to partially fulfill the Social Science component of the General Education requirements.

GEO 280 Geography of Cyberspace
3 Cr .
A course exploring the geographical dimensions of the Internet, media, and telecommunications. Includes consideration of urban telecommunication, online community, and virtual spaces. May be used to partially fulfill the Social Science component of the General Education requirements.

GEO 301/501 Regional Geographies of the World
3 Cr .
A geographic interpretation of the environmental, cultural, political, and economic patterns of one of the world's major regions, such as the United States and Canada, Latin America, Europe, Asia, or Africa. May be repeated for credit when the regional offering is different. Certain regional offerings may be used to fulfill the Cultural Diversity course component of the General Education Requirements or may be used to partially fulfill the Social Science component of the General Education Requirements. Prerequisite: junior or senior standing.

GEO $320 \quad$ Urban Geography
3 Cr .
A course treating urban settlements as distinct geographic units. Topics covered include the history of urban settlement, economic classification of cities, and patterns of urban land use. Field trip. May be used to partially fulfill the Social Science component of the General Education requirements. Prerequisite: junior or senior standing.

## Urban and Regional Planning

 3 Cr .A course treating the nature, purposes, and objectives of modern community planning for the promotion of social and economic wellbeing. Field trip. May be used to partially fulfill the Social Science component of the General Education requirements. Prerequisite: junior or senior standing.

This course examines the changing geography of rural areas. Topics include globalization and the transformation of rural economies, agriculture, rural environmental issues, tourism, rural cultures and identities, and the geography of country music. May be used to partially fulfill the Social Science component of the General Education requirements. Prerequisite: junior or senior standing.

GEO 470/570 Political Geography 3 Cr .
An investigation of the relations among political activities and organizations and the geographic conditions within which they develop. Political power is discussed in terms of spatial, human, cultural, and ethnic geography. May be of interest to political science majors. May be used to partially fulfill the Social Science component of the General Education requirements.

GEO 474/574 Historical Geography of the United States 3 Cr.
A regional treatment of the exploration, colonization, territorial expansion, migration, transportation, settlement, and economic development of our country in relation to the physical environment. Course is primarily designed for students majoring in one of the social sciences. May be used to partially fulfill the Social Science component of the General Education requirements. Prerequisite: junior or senior standing. May be of particular interest to history majors.

GEO 475/575 Culture, Nature, Landscape
3 Cr .
An advanced course in cultural geography exploring the integration of culture and nature in both material landscapes and their representation in art, literature, or other media. The examination of culture includes consideration of race, ethnicity, gender, and nationality. Field trip. May be used to partially fulfill the Social Science component of the General Education requirements. Prerequisite: junior or senior standing.

## Environmental and Geographic Information Science Courses

$2+4,4 \mathrm{Cr}$.
The scientific analysis of natural processes and human impacts affecting the development of landscapes on the earth and other planets. Emphasis is on the interrelationships of geologic, climatic, hydrologic, and biological cycles in creating and reshaping landforms. Field trips. Course includes a laboratory component. May be used to partially fulfill the Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

## GEO 204 National Parks

3 Cr .
A study of geographic concepts, both physical and cultural, of many national park areas, including all of the 55 national parks, many national monuments, and other areas controlled by the park system. Required four-day field trip during the fall break to Mammoth Cave National Park.

GEO 215 Introduction to Geographic Information Systems 3+2, 4 Cr
An introduction to the theory and practical use of geographic information systems. These powerful research tools combine computer mapping and databases to provide diverse combinations of spatial information and modeling capabilities to enhance decision-making processes and planning. GIS usage is also highly multidisciplinary; the class may be of interest to students of several other programs such as civil engineering, biology, business, or health sciences. Course includes a laboratory component.

An introduction to the fundamentals of earth analysis in geography and meteorology using digital and photographic data acquired by a variety of aircraft and satellite sensors. Topics include fundamentals of light interaction with earth features, visual image interpretation, photogrammetry, environmental monitoring, change analysis, and introduction to digital image processing. May be of interest to students in biology, environmental science, and civil engineering.

## GEO 240 Introduction to Climate Change

(Also offered as MET 240.) An exploration of past climate changes and the issue of contemporary, anthropogenic, greenhouse warming. Students will gain an understanding of the major forcing mechanisms behind climate change, as well as the feedbacks that are important in the climate system. Not open to students who have received credit for MET 440. Prerequisites: MET 103.

GEO 260 Environmental Conservation 3 Cr.
A study of American and International resource problems and environmental issues, the institutions and attitudes involved, and solutions for correcting them.

GEO 285 Natural Hazards 2+2, 3 Cr
An investigation of the physical causes, geographic distribution, and human threats of a wide range of environmental hazards, including earthquake, volcano, tsunami, landslide, hurricane, tornado, and flood disasters. The course will make abundant use of GIS and remote sensing technology.

Topics in Geography
1-3 Cr.
This course is designed to examine current geographic topics. These may include American minority settlement patterns and communities, cultural ecology, geographic techniques, travel and tourism, medical geography, and problems associated with the physical environment. May be repeated when the topic is different.

Field Study in European Geography
3 Cr .
Overseas Study Program only.
Biogeography
3 Cr .
This course introduces students to an important interdisciplinary bridge between biology and geography. Biogeography is the study of inferring ecological and evolutionary relationships between living organisms and their physical environment from the analysis of their spatial and temporal distribution patterns. Students will learn to assess patterns of variation across physical gradients such as latitude, climate, elevation, and isolation in relation to the distribution of plant and animal species on the earth. The course will also discuss human activities such as domestication, habitat alteration, species introduction and extinctions, and global environmental changes.

A course designed to develop methods and techniques of geographic field work. May include a week of intensive work at a field site at a time when the University is not in session, possibly in late summer. Additional fees may be charged to cover expenses. Prerequisite: consent of the department chair.

## GEO 404/504 Advanced Geomorphology

$2+4,4 \mathrm{Cr}$.
A study of the principles and analysis of complex geomorphic processes and the resulting landforms. Students will enhance their knowledge of physiographic processes and topographic forms through laboratory exercises and a required 4-day field trip. Prerequisite: GEO 104.

GEO 415/515 Advanced Geographic Information Systems
3 Cr .
A course in research design and execution using GIS. Students will enhance their knowledge of GIS packages and advanced operations while researching a topic or problem. Individual and/ or class projects will also focus on designing research for GIS. Prerequisite: GEO 215.

Advanced Remote Sensing
3 Cr .
This course focuses on advanced data processing methods for extracting earth information from satellite and air borne digital imagery. Students will also gain knowledge of the remote sensing process by conducting a semester long project on an approved research topic. Prerequisite: GEO 230.
(Also offered as MET 460.) This course will examine the analysis methods used in the geosciences, with a focus on environmentally collected data sets. The course emphasizes visualization of data, as well as applications ranging from basic model building to regression and introductory time series analysis. The primary tool for analysis is R , an open source software package that runs on virtually any platform. Prerequisites: at least junior standing in Meteorology or Geography programs.

Internship in Geography 1-6 Cr.
Students gain experience by working in public or private agencies, such as planning firms, national parks, and map companies. Prerequisites: geography major or minor and consent of internship coordinator. S/U grade only.

## GEO 490/590 Selected Topics in Geography

1-3 Cr.
Advanced studies in geography. Such topics as landform analysis, human environmental impact, biogeography, environmental management, and international business are considered. May be repeated when the topic is different. Prerequisite: junior or senior standing.
GEO 492 Research in Geography 1-3 Cr.

Students working individually or as part of a research group conduct original research in geography under the direction of a faculty member. Students collect and analyze data and report their results in both writing and in an oral presentation. Open to all students regardless of class standing. S/U grade. Prerequisite: consent of the instructor.

Independent Study
Individual research readings on a topic in geography agreed upon by a student and a faculty member of his/her choice from the department. Prerequisites: junior or senior standing and consent of the chair of the department.

Honors Work in Geography
See Honors Work, page 63.
Honors Candidacy in Geography
3 Cr .
See Honors Work, page 63.

## Meteorology Courses

MET 103 Introduction to Meteorology 3+2, 4 Cr .
An introductory course providing a general overview of atmospheric science with emphasis on midlatitude cyclones and anticyclones, air masses, atmospheric stability, precipitation processes, and convection. Course includes a laboratory component. May be used to partially fulfill the Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

Weather Technology
A course designed to give students experience using available weather technology. Students will be introduced to the Linux operating system, computer software specifically used in meteorology, and plotting meteorological charts. Introduction of simple shell scripting and map making will play a large role in the course. Additionally, students will be introduced to formal map analysis and mid-latitude weather systems. Prerequisite: MET 103.

MET 215 Climatology 2+2, 3 Cr .

## MET 190

Topics in Weather and Climate
This course provides general-education studies in atmospheric science, with potential topics including unusual weather, Great lakes weather and climate, and climate change. This course is designed for non majo interested in learning about weather and climate and includes a laboratory component. May be used to fulfill the Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

A study of the scope and controls of climate and an investigation at the global, regional, and local scales. Included are climate classification, climate models, and climate change. Course includes a laboratory component. Prerequisite: MET 103.

Introduction to Meteorological Observation and Analysis
3 Cr .
Introduces atmospheric structures, conceptual models, and the basic techniques of meteorological analysis. Upperair and surface observation codes, NCEP operational products, and atmospheric observing systems, including Doppler radar, wind profilers, satellites, and ASOS are discussed. Prerequisite: MATH 131 and either MET 103 or consent of the instructor.

Introduction to Climate Change
3 Cr .
(Also offered as GEO 240.) An exploration of past climate changes and the issue of contemporary, anthropogenic, greenhouse warming. Students will gain an understanding of the major forcing mechanisms behind climate change, as well as the feedbacks that are important in the climate system. Not open to students who have received credit for MET 440. Prerequisites: MET 103.

A study of the physical processes of the earth's boundary layer and microclimate. Topics will include turbulent transfer in the boundary layer, the surface energy balance, turbulent fluxes of heat, moisture, and momentum, evapotranspiration, and the modification of weather and climate due to surface and boundary layer conditions. Prerequisite: MET 216.

Survey of the atmospheric system, including basic characteristics and variables; radiation thermodynamics; vertical temperature structures; stability concepts, and evaluation; physics of clouds and precipitation processes. Prerequisites: Meteorology majors only, MATH 253 and MET 216.
MET 372/572 Atmospheric Dynamics I ..... $3+2,4 \mathrm{Cr}$.A general survey of the fundamental forces and laws that govern atmospheric processes. Emphases are on thederivations and applications of the basic equations of motion, atmospheric thermodynamics, gradient andgeostrophic flow, and the general circulation. Course includes a laboratory component. Prerequisites: Meteorologymajors only, MATH 253 and MET 216.
MET 373/573 Atmospheric Dynamics II ..... $3+2,4 \mathrm{Cr}$.Second semester dynamics course emphasizing quasi-geostrophic dynamics, wave motions, barotropic andbaroclinic instabilities; cyclone structure, jet streaks, and secondary thermal circulations. Laboratory case studiesand exercises. Prerequisite: MET 372.
MET 385/585 Field Study in Meteorology ..... $0+4,3 \mathrm{Cr}$.
Field work emphasizing aspects of meteorological analysis and forecasting. Topics include severe storm prediction,spotting and interception, and aviation meteorology. May be repeated for credit if the topics are different.Additional fees charged to cover expenses. Prerequisite: consent of the instructor.
MET 430/530 Numerical Weather Prediction ..... 3 Cr.An introduction to numerical modeling techniques and weather prediction models: model fundamentals,structures, dynamics, physical parameterization, and model forecast diagnostics. Students will gain experiencerunning simple codes and study different aspects and intelligent use of weather models. Prerequisite: MET 330.
MET 435/535 Radar Meteorology ..... 3 Cr .Examines the theoretical and operational principles of meteorological Doppler radar, including dual polarizationmethodologies. Atmospheric refractivity and its impact on wave propagation, data quality, and algorithms arediscussed. Prerequisites: MET 216 and MATH 253.
MET 440/540 Global Climate Change ..... 3 Cr .
An examination of the physical processes of global climate change, both past and future. The emphasis will be on the issues of future climate change, including greenhouse forcing and important atmospheric and oceanic feedback mechanisms. The course will also investigate local and regional climate changes resulting from land use, such as deforestation and desertification. In addition to discussing relevant literature, students will explore several climate data sets. Prerequisite: MET 215 and MATH 131.

## MET 460/560 Data Analysis <br> 3 Cr .

(Also offered as GEO 460.) This course will examine the analysis methods used in the geosciences, with a focus on environmentally collected data sets. The course emphasizes visualization of data, as well as applications ranging from basic model building to regression and introductory time series analysis. The primary tool for analysis is R , an open source software package that runs on virtually any platform. Prerequisites: at least junior standing in Meteorology or Geography programs.
MET 480/580 Synoptic Scale Analysis and Forecasting
$3+2,4 \mathrm{Cr}$.
A capstone course that applies the principles of atmospheric dynamics and thermodynamics to describe the formation, organization, and evolution of mid-latitude weather systems. Topics include historical aspects of extratropical cyclone theory, scales of atmospheric motion, development and movement of mid-latitude cyclones from a quasi-geostrophic, potential vorticity, and energy perspective, synoptic satellite applications and interpretation, Rossby wave theory, basics of numerical weather predictions models, basic forecast methods, and forecast verification. Students present their forecasts in oral and written formats, and serve in the Valparaiso University weather center to issue local forecasts and answer public inquiries. Course includes a laboratory component. Prerequisites: MET 373.

## MET 481/581 Mesoscale Analysis and Forecasting

$3+2,4 \mathrm{Cr}$.
A capstone course applying principles of atmospheric dynamics and thermodynamics to the processes that focus and organize mesoscale weather systems. Topics include mechanically and thermally driven circulations such as land/sea breezes, lake-effect snow, slope/valley flows, mountain waves, and polar lows. Atmospheric stability, convection theory, atmospheric discontinuities, severe convention, MCCs, and analysis and forecast methods are examined. Course includes a laboratory component. Prerequisite: MET 480.

| MET 486/586 | Internship in Meteorology <br> Students gain experience by working in National Weather Service offices, government laboratories, private consulting firms, or media and broadcasting stations. Prerequisites: meteorology major and consent of internship coordinator. S/U grade only. |
| :---: | :---: |
| MET 490/590 | Selected Topics in Meteorology <br> Advanced studies in applied and theoretical meteorology, Topics such as weather systems analysis, micrometeorology, and atmospheric observing systems may be considered. May be repeated when topic is different. Prerequisite: MET 216. |
| MET 495 | Independent Study <br> Individual research readings on a topic in meteorology agreed upon by a student and a faculty member of his/her choice from the department. Prerequisites: junior or senior standing and consent of the chair of the department. |
| MET 497 | Honors Work in Meteorology <br> See Honors Work, page 63. |
| MET 498 | Honors Candidacy in Meteorology <br> See Honors Work, page 63. |

## History

Learn more about the Department of History at Valpo online.

## Professors Rittgers, Schaefer; Associate Professors Ostoyich (chair), Seguin; Assistant Professors Carter, Elder, Ramos, Xia.

One of the central disciplines of the traditional liberal arts, history is concerned with understanding the development of societies and cultures which produced the world as we know it. The historian operates under the assumption that the past is of fundamental importance in today's decision-making and in formulating tomorrow's dreams. History provides a solid major for those with career goals in law, teaching, journalism, government, and the ministry. Combining a history major with a Fundamentals of Business Minor has proved to be a popular alternative for those who have strong interests in history and who plan to pursue a business career. Since the history student integrates materials from the social and behavioral sciences, literature, philosophy, religion, and the arts, history is also a field for students who view the undergraduate years as a time to explore a variety of subjects.

## Bachelor of Arts - History Major (Minimum 30 Cr.)

| HIST 100 | European History | 3 Cr. |
| :--- | :--- | :--- |
| HIST 110 | The World in the Twentieth Century | 3 Cr. |
| HIST $\mathbf{3 0 0}$ | Historiography and Methods | 3 Cr. |
| HIST $\mathbf{4 9 3}$ | Research Seminar | 3 Cr. |
| Twelve credits from $\mathbf{3 0 0}$ or $\mathbf{4 0 0}$-level courses (at least one course in each of the following fields): |  |  |
| History of the Americas |  |  |
| European History |  |  |
| Non-Western History |  |  |

Students who plan on graduate work in history are strongly urged to acquire reading proficiency in at least one modern foreign language.

## History Minor (Minimum 18 Cr.)

| HIST 100 | European History |
| :--- | :--- |
| HIST $110 \quad$ The World in the Twentieth Century | 3 Cr. |
| Nine credits from $\mathbf{3 0 0}$ or $400-l e v e l ~ c o u r s e s ~(a t ~ l e a s t ~ o n e ~ c o u r s e ~ i n ~ e a c h ~ o f ~ t h e ~ f o l l o w i n g ~ f i e l d s): ~$ |  |
| History of the Americas |  |
| European History |  |
| Non-Western History |  |


| History Education Major (Minimum 51 Cr.) |  |  |
| :---: | :---: | :---: |
| HIST 100 | European History | 3 Cr . |
| HIST 110 | The World in the Twentieth Century | 3 Cr . |
| HIST 120 | The American Experience to 1877 | 3 Cr . |
| HIST 121 | The American Experience in the Modern World | 3 Cr . |
| HIST 300 | Historiography and Methods | 3 Cr . |
| One course from the following options: |  |  |
| HIST 310 | Greek Civilization | 3 Cr . |
| HIST 311 | Roman Civilization | 3 Cr . |
| HIST 493 | Research Seminar | 3 Cr . |
| Fifteen credits from 300 or 400-level courses (at least one course in each of the following fields): |  |  |
| History of the Americas |  |  |
| European History |  |  |
| Non-Western History |  |  |
| Note: HIST 390 or HIST 492 may be used to fulfill a field requirement if the topic is appropriate. |  |  |
| Additional courses required ${ }^{2}$ : |  |  |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| GEO 102 | Globalization and Development | 3 Cr . |
| GEO 280 | Geography of Cyberspace | 3 Cr . |
| POLS 120 | The Government of the United States | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |

## Degree

Completion of the degree requirements of the College of Arts and Sciences with a major in history leads to the Bachelor of Arts degree.

## Pre-Law Students

Pre-law students who are taking a major in history should consult their advisor about appropriate course selections and about the selection of a second major or a minor.

## Credit by Examination

Credit for HIST 100 and 110 may be earned through the College Level Examination Program subject examination in Western Civilization or through the Advanced Placement examination offered by the College Entrance Examination Board.

Credit for HIST 120 and 121 may be earned through the College Level Examination Program subject examination in American History or through the Advanced Placement examination offered by the College Entrance Examination Board.

## Approval of Schedules

Each class of majors is assigned to a member of the department for advising. The chair advises minors.
Note: Any 3-credit history course may be used to fulfill the Humanities: History component of the General Education Requirements. Certain History courses may be used to fulfill the Cultural Diversity course component of the General Education Requirements; see course descriptions for details.

## History Courses

A survey of American history from the Columbian exchange through the end of Reconstruction, with emphasis on cultural contact, democratic ideals and realities, western expansion, and sectional conflict.

[^1]| HIST 121 | The American Experience in the Modern World <br> A survey of American history from Reconstruction to the present, with emphasis on industrialization, reform movements, immigration, civil rights, and global wars. |
| :---: | :---: |
| HIST 140 | Introduction to East Asian Culture <br> An exploration of the main political, social, and cultural values in traditional China, Japan, Korea, and Vietnam and of the ways that they flourish today. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. |
| HIST 215 | Medieval Europe <br> A survey of Europe in the Middle Ages with particular emphasis on feudalism, chivalry, religion and religious persecution, early state formation, and the Black Death. |
| HIST 225 | Alternative Perspectives of United States History <br> An examination of oppression, resistance, and identity formation in African American, American Indian, Latino, or Asian American culture. This course may be repeated for credit if the selected subjects are different. Although history majors may take any number of these courses, they may include no more than two in a thirty-hour major. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. |
| HIST 232 | Latin American History and Society <br> A survey of Latin American history from indigenous civilizations through the Spanish colonial period and modern national histories, with emphasis on enduring patterns in the region's cultures and societies. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. |
| HIST 250 | African History and Society <br> A survey of pre-colonial and colonial African history that highlights the diversity of African societies. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. |
| HIST 300 | Historiography and Methods <br> Developments in American, European, and Non-western historiography will be studied. In addition, this course offers a practicum in historical research methods as well as opportunities to formulate your own historiographic interpretations. Restricted to history majors. Prerequisites: HIST 100 and HIST 110. |
| HIST 351 | Survey of English History and Culture <br> A survey of English life from Roman times to the present, emphasizing broad movements, themes, and institutions. Cambridge Center only. |

Note: The courses listed below require at least sophomore standing or consent of the chair of the department.

## European History Courses

HIST 304/504 European Imperialism and the Colonial Experience 3 Cr .
A study of European theories of imperialism will be investigated as they were implemented in specific colonies throughout the Americas, Africa, Eurasia, and Asia. Particular attention will be given to the historical and psychological experience of being colonial master or servant by drawing on film, novels, and post-colonialist literature. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

HIST 310/510 Greek Civilization 3 Cr .
(Also offered as CLC 310.) A study of Greek civilization from the late Bronze Age through the Hellenistic period, with emphasis on political, social, and cultural developments. No knowledge of Greek or Latin required. Prerequisite: sophomore standing or consent of the chair of the department.

HIST 311/511 Roman Civilization
3 Cr.
(Also offered as CLC 311.) A study of Roman civilization from the 8 th century B.C. to the Council of Nicea in A.D. 325, with emphasis on political, social, and cultural developments. No knowledge of Greek or Latin required. Prerequisite: sophomore standing or consent of the chair of the department.

HIST 312/512 Reformation Europe 3 Cr .
(Also offered as THEO 329/529.) A study of the political, socioeconomic, and religious conditions in Europe during the Reformation movements of the sixteenth century, with emphasis on popular piety, gender relations, and missionary activity.
HIST 313/513 History of Modern Britain ..... 3 Cr .An overview of British history from the Glorious Revolution to the present. Particular attention is given toindustrialization, sex and gender in the Victorian era, social reform, imperialism, Anglo-Irish relations, and WorldWars I and II.
HIST 315/515 Contemporary Europe: Century of Violence ..... 3 Cr .A study of twentieth-century Europe, with emphasis on relations between Nazi Germany and Europe, including theUSSR and the United States where applicable. The course explores the rise of ideologies such as nationalism,communism, and fascism, the major wars, and the dominant issues associated with the post-World War II world.
HIST 316/516 Blood and Iron: Imperial Germany, 1871-1918 ..... 3 Cr .A study of the political, social, and cultural development of Imperial Germany from its founding until its destructionduring the First World War. The course considers the respective roles that personality (e.g., Bismarck and KaiserWilhelm II), class, and religion had in forging a path for the German nation-state.
HIST 317/517 Hitler and the Third Reich ..... 3 Cr . A study of the rise and reign of Adolf Hitler and National Socialism. The course analyzes the man and the movement within the larger social, economic, and political trends of nineteenth and twentieth-century Germany. The course is structured around a variety of historical debates (i.e., historical continuity versus discontinuity, Hitler as "weak" dictator or "strong" dictator, etc.). This course examines the racial, political, and geopolitical aspects of National Socialism and provides extensive coverage of the Holocaust.

HIST $318 \quad$ The Old Regime and the French Revolution
3 Cr .
A detailed study of the causes and effects of the French Revolution. Topics discussed include the Enlightenment, social conditions, the monarchy, human rights, and the Napoleonic Era. Seminar discussions will be based on both primary and secondary source readings.

## History of the Americas Courses

HIST 235 Modern Mexico: Competing Visions of the Nation 3 Cr .
The primary focus of the course will be on consolidation of the nation state, including the nineteenth-century clash of Liberal and Conservative visions of modernity, the Revolution of 1910 and its aftermath, the emergence of civil society, and the uprising in Chiapas in the 1990s. Students explore competing definitions of Mexican identity and their role in hindering or facilitating national unity. Emphasis is placed on the role of regionalism and popular activism. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

## HIST 320/520 Colonial America 3 Cr .

A detailed study through readings and discussion of the major issues in colonial life. Topics will range from contact with Native Americans, to the Salem witch trials, to the origins of slavery. Students will examine European settlement patterns in the four regions of British North America, including family, religious, and political life. The course will conclude by studying the social, military, and political strain placed on colonial institutions by the Seven Years' War.

HIST 321/521 The American Revolution, 1763-1789 3 Cr .
A detailed study through readings and discussion of the unresolved conflicts between Great Britain and her American colonies; the political, military, and social aspects of the revolution; and the postwar problems culminating in the adoption of the Constitution.

HIST 323/523 Civil War and Reconstruction 3 Cr .
A study of the great watershed conflict in American history, with special emphasis on the problems of Black Americans.

HIST 324/524 Depression and War: The United States, 1929-1945
3 Cr .
This course examines the nature of the Great Depression and its effects on the relationship of government to citizens in the United States. It also traces the European and Far Eastern origins of the American involvement in World War II as well as the diplomatic and military conduct of that war.

HIST 325/525 The Age of Anxiety: United States since 1945
3 Cr .
An examination of the post war American response to the prospect of living in an uncertain world.

## HIST 327/527 History of Chicago

A study through readings and discussion of Chicago's development from a frontier village, to a bustling town, to the "Second City," to a postindustrial metropolis.

## HIST 329/529 Revolution! Insurgence in Latin America

Why is "social change" such a common notion, yet revolutions are so rare? This course draws upon interdisciplinary theories of revolution and examines conditions and social forces that may lead to-or inhibit-revolution. Case studies include both "successful" revolutions and "failed" efforts, from Mexico to Cuba, Nicaragua to Argentina, and beyond. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

HIST 333/533 Latin America in the Cold War Era 3 Cr .
This course examines the political and social implications of the Cold War throughout Latin America. Study will include the Guatemala coup, the Cuban Revolution, the military dictatorships of the 1970s-1980s, civil wars and revolution in Central America, and Mexico's "dirty war." May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

HIST 394/594 Beats and Hippies
3 Cr.
A study of the nature of post-World War II American culture through the examination of a cross section of its critics. Course materials include writings of poets, novelists, essayists, and journalists as well as collections of photos, documentaries, and commercial films.

## Non-Western History Courses

HIST 341/541 Revolution and Its Roots: The Making of Modern China 3 Cr.
A study of the decline of traditional civilization resulting from domestic crises and foreign pressures, and the search for a new orthodoxy in the Chinese revolution. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

HIST 342/542 Tragedy and Triumph: The Making of Modern Japan
3 Cr .
A study of Japan's rise to its position as a world power, the tragedy of the war period, and its triumph as an economic power in the postwar world. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

HIST $350 \quad$ Colonialism and Independence: Understanding Modern Africa 3 Cr.
A topical study of Africa's struggle for political, economic, and cultural identity in the twentieth century with emphasis on exploring new historiographical methods emerging in African/world history. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

HIST 355/555 Modern Middle Eastern History 3 Cr.
A retrospective look through documents, films, and literature at the history of the region beginning with the rise of Islam and the legacy of early splinter movements that profoundly impact twentieth century history. Particular attention is given to the breakup of the Ottoman Empire and the rise of Zionism in order to contextualize the ArabIsraeli conflict. Lastly, individual countries are studied to enhance understanding of the Middle East's influence on international affairs. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

## Specialized Offerings

| HIST 386 | Internship in History <br> Students gain experience working for an organization that utilizes historical applications. Such organizations might <br> include historical museums and historical parks. Prerequisite: junior standing and application in writing to <br> department chair a semester in advance. |
| :--- | :--- |
| HIST 390/590 | Topics in History <br> A study that covers a particular, large subject in history (e.g., a period or a field), selected according to student <br> interest and instructor choice. This course may be repeated for credit if the selected subjects are different. |
|  | Appropriate topics may be designated to fulfill the requirement in European history, history of the Americas, or <br> non-Western history. |
| HIST 393/593 | History through Film <br> A study of the relationship among history, film, and theory in a specific geographical and chronological context. This <br> course may be repeated for credit if the selected subjects are different. Although history majors may take any |
| number of these courses, they may include no more than two in a 30-hour major. |  |

# International Studies 

Professors Duvick, Kilpinen (chair), Nelson, Schaefer; Associate Professors Ames, Atchison, Devaraj, Hoult-Saros, G. Johnson, Pati, Raman, Zamora-Breckenridge; Assistant Professors Potter, Trexler, Xia, Y. Zhang.

The International Studies Department offers five interdisciplinary Bachelor of Arts (B.A.) degrees listed below. A student's course of study, and therefore degree option, is designed to meet individual career objectives leading to employment in foreign service, international organizations, international business, non-governmental organizations, philanthropic organizations, communications, or education among others. In addition, our graduates go on to attend some of the strongest graduate and professional schools in America and abroad.

The world is truly a global village with the internet exemplifying how interconnected we are. Within nanoseconds financial transactions can be secured, news items broadcast, and pictures of human rights abuses shared between continents and, more importantly, between individuals. The imperative to gain understanding about the benefits of globalization as well as continued inequalities between peoples and nations has never been greater. The International Studies Department approaches cultures and identities transnationally, steering away from the dichotomy of the West versus the Rest. The department combines interdisciplinary approaches to area studies-East Asia, Latin America and Europe-as well as on thematic issues such as globalization, humanitarian aid and sustainable development, human rights and social justice, conflict and global security, migration and transnationalism, environmental issues, and poverty reduction. All the degree options offer training in theory and methods. The interdisciplinary nature of the majors involve classes in ethnology, cultural awareness, foreign language, history, political science, economics, and study abroad, all leading to a faculty-mentored senior research project.

The International Studies Department's degree conferral majors and minors are:

- Chinese and Japanese Studies
- Global Service
- International Economics and Cultural Affairs
- Latin American and Latino Studies
- Middle East Studies (minor)

Also see International Relations under Political Science and International Relations

## International Studies Courses

## INTL 150 Global Perspectives

An interdisciplinary introduction to the concept of culture from both the Western and non-Western view, to the meaning of culture for the development of religious, economic, political, and social institutions, and to the significance of cultural perspective in approaching global ideas. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

A study of selected themes or issues in international affairs or global studies that may be used to fulfill requirements in all degree conferral majors associated with the International Studies Department.

Global Humanitarianism Examined
The course examines humanitarian service in global perspective. It assesses both the historical and contemporary records of development aid, religiously motivated efforts, human rights modalities, bi and multilateral aid at the government level, and the latest ventures in sustainable development. The course is designed around case studies, group projects, and grant writing-the foundation of humanitarian efforts. The aim of the course is to make students aware of the pitfalls associated with the record of humanitarian aid, but resolute in their determination to improve the world wisely. Prerequisite: INTL 150, GEO 102, or consent of the department chair.

## INTL $335 \quad$ Perspectives on Health Care in Costa Rica

This class provides an in-depth study of health care topics relating to gender roles, environment issues, and immigrant status. Students will delve into the study of health through an introduction to demography, social factors related to health and illness, epidemiology, and comparative health systems. The class also assesses the ethics of universal health care in a developing nation. Field trips to public and private hospitals, neighborhood health centers, HIV centers, and urban immigrant communities will provide a broad understanding of the sociology of healthcare in Costa Rica. Costa Rica Center only.
Ethnology and History of Costa Rica
3 Cr.
Through readings, discussion, lectures, films, field trips, and personal interviews, students will be introduced to the historical, political, economic, and environmental factors which shape the Central American reality. Special attention will be given to racial, ethnic, and social diversity present in Costa Rica. In addition, students will gain perspective on the role of the United States in the region, the effects of globalization, and ongoing struggles for social change. Costa Rica Center only.
INTL 390/590 Advanced Topics in International Studies
3 Cr .
Advanced study of selected themes or issues in international affairs or global studies that may be used to fulfill requirements in all degree conferral majors associated with the International Studies Department. This course may be cross listed as a graduate level class.

International Experience: Preparation
0.5 Cr .

This course prepares students for study abroad by introducing them to issues such as culture shock, cross-cultural communications, and the experience of living abroad, including money management, travel planning, and health \& safety.

INTL 485 International Experience: Re-entry
0.5 Cr.

This course assists students in reintegration back into life in America by requiring them to read and reflect on reentry literature. It also provides a forum for students to communicate their experiences with each other and the instructor. It is recommended that all students register for this class upon returning to Valparaiso University.

## International Internship

1-3 Cr.
Direct supervised experience in a cooperating business, government agency, or service organization, abroad or in the United States. Prerequisite: consent of the chair.

## Senior Seminar

1 Cr.
A course required of all senior majors in the International Studies Department with degree conferral in International Economics and Cultural Affairs, International Service, or Latin American and Latino Studies. In this class students explore a central topic, learn research methodology, and prepare the proposal and outline for their senior independent research project (INTL 495). Prerequisite: senior standing or consent of the chair.

## Senior Research Project

A course required of all senior majors in the International Studies Department with degree conferral in International Economics and Cultural Affairs, International Service, or Latin American and Latino Studies. Majors write a major research paper on a topic identified in INTL 493, Senior Seminar. Prerequisite: INTL 493 and senior standing or consent of the chair.

# Chinese and Japanese Studies 

Learn more about Chinese and Japanese Studies at Valpo online.

Administrative Committee: Professors Longan (Geography and Meteorology) Nelson (Psychology), Schaefer (International Studies); Associate Professors Pati (Theology), Prough (Christ College), Schoer (Chemistry); Assistant Professors Kavanagh (Foreign Languages and Literatures), Xia (History), Y. Zhang (International Studies); Lecturer Meng (Foreign Languages and Literatures).

Students completing the program in Chinese and Japanese Studies will have fulfilled major field requirements for the Bachelor of Arts degree under the interdisciplinary program option. Students majoring in another field may fulfill the major field requirements by completing a second major or a minor in Chinese and Japanese Studies.

## Objectives

Programs in Chinese and Japanese Studies provide an opportunity for students to focus their study on this important area of the world, by examining the history, culture, and society of China and Japan, in addition to developing some proficiency in the Chinese or Japanese language. It provides essential background for students considering a career in education, business, government, or the arts related to the East Asian cultural sphere. Students are strongly encouraged to participate in overseas programs in East Asia, particularly at the University's exchange program at Zhejiang University and at Kansai Gaidai in Japan. Courses taken in exchange programs may be used to fulfill major and minor requirements.

## Bachelor of Arts - Chinese and Japanese Studies Major (Minimum 46 Cr.)

A minimum of 46 credit hours, selected from the following list of courses approved by the administrative committee constitutes a major in Chinese and Japanese Studies. A number of these courses may also be counted toward fulfillment of the General Education Requirements for the Bachelor of Arts degree. FLJ 101 and 102 may fulfill the Foreign Language Requirement; any of the theology courses may fulfill the Theology Level III Requirement; any of the history courses or PHIL 220 or 290 may fulfill the Philosophical and Historical Studies Requirement; ART 311 may fulfill the Fine Arts/Fine Arts-Literature Requirement; and any appropriate course may fulfill the Non- Western or Third World Studies requirement. Other appropriate courses, including credits in supervised reading and research, may be substituted with the permission of the chair of the committee.

| EAST 140 | Introduction to East Asian Culture | 3 Cr . |
| :---: | :---: | :---: |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| One group from the following options: |  |  |
| Four semesters of Japanese Language (except FLJ 200, 250, 481, 482, 483, or 486) |  | 16 Cr . |
| Four semesters of Chinese language (except FLC 481, 482, 483, 486; may include EAST 109, 110, 209, 210, 309, and 310) |  | 16 Cr . |
| Two course from the following Humanities options: |  |  |
| EAST 340 | East Asian Humanities Topics | 3 Cr . |
| EAST 390 | Topics in East Asian Studies | 3 Cr . |
| FLJ 200 | Japanese Literary Studies | 3 Cr . |
| FLJ 250 | Topics in Japanese Literature and the Fine Arts | 3 Cr . |
| HIST 393 | History Through Film (East Asian Film) | 3 Cr . |
| PHIL 220 | Asian Philosophy | 3 Cr . |
| Two courses from the following Social \& Environmental Sciences options: |  |  |
| EAST 325 | Cross-Cultural Psychology | 3 Cr . |
| EAST 345 | East Asian Social and Environmental Sciences Topics | 3 Cr . |
| EAST 390 | Topics in East Asian Studies | 3 Cr . |
| ECON 290/390 | Topics in Economics (East Asian Topics) | 3 Cr . |
| GEO 301 | Regional Geographies of the World (Asia) | 3 Cr . |
| POLS 332 | Politics of China and East Asia | 3 Cr . |
| One of the following East Asian Religions options: |  |  |
| EAST 363 | Religions of China and Japan | 3 Cr . |
| EAST 365 | Psychology and Religion | 2 Cr . |
| and EAST 367 | Buddhist Perspectives on Psychology and Religion | 1 Cr . |
| EAST 493 | East Asian Senior Seminar | 3 Cr . |
| One or more elective courses listed in the table on page 184 |  | 3 Cr . |

## Bachelor of Arts - Chinese and Japanese Studies Complementary Major (Minimum 33 Cr.)

A student fulfilling major field requirements under a major option in another field may pursue Chinese and Japanese Studies as a second major. Select from the following courses. Other appropriate courses, including credits in supervised reading and research, may be substituted with the permission of the chair of the committee.

| EAST 140 | Introduction to East Asian Culture | 3 Cr . |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| One group from the following options: |  |  |
| Four semesters of | nese Language (except FLJ 200, 250, 481, 482, 483, or 486) | 12 Cr . |
| Four semesters of EAST 109, | nese language (except FLC 481, 482, 483, 486; may include 209, 210, 309, and 310) | 12 Cr . |
| One course from the following Humanities options: |  |  |
| EAST 340 | East Asian Humanities Topics | 3 Cr . |
| EAST 390 | Topics in East Asian Studies | 3 Cr . |
| FLJ 200 | Japanese Literary Studies | 3 Cr . |
| FLJ 250 | Topics in Japanese Literature and the Fine Arts | 3 Cr . |
| HIST 393 | History Through Film (East Asian Film) | 3 Cr . |
| PHIL 220 | Asian Philosophy | 3 Cr . |
| One course from the following Social \& Environmental Sciences options: |  |  |
| EAST 325 | Cross-Cultural Psychology | 3 Cr . |
| EAST 345 | East Asian Social and Environmental Sciences Topics | 3 Cr . |
| EAST 390 | Topics in East Asian Studies | 3 Cr . |
| ECON 290/390 | Topics in Economics (East Asian Topics) | 3 Cr . |
| GEO 301 | Regional Geographies of the World (Asia) | 3 Cr . |
| POLS 332 | Politics of China and East Asia | 3 Cr . |
| One of the following East Asian Religions options: |  |  |
| EAST 363 | Religions of China and Japan | 3 Cr . |
| EAST 365 | Psychology and Religion | 2 Cr . |
| and EAST 367 | Buddhist Perspectives of Psychology and Religion | 1 Cr . |
| EAST 493 | East Asian Senior Seminar | 3 Cr . |
| One or more elective courses listed in the table on page 184 |  | 3 Cr . |

International Studies

## Chinese and Japanese Studies Minor (Minimum 18 Cr.)

| EAST 140 | Introduction to East Asian Culture | 3 Cr . |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| One course from the following Humanities options: |  |  |
| EAST 340 | East Asian Humanities Topics | 3 Cr . |
| EAST 390 | Topics in East Asian Studies | 3 Cr . |
| FLJ 200 | Japanese Literary Studies | 3 Cr . |
| FLJ 250 | Topics in Japanese Literature and the Fine Arts | 3 Cr . |
| HIST 393 | History Through Film (East Asian Film) | 3 Cr . |
| PHIL 220 | Asian Philosophy | 3 Cr . |
| One course from the following Social \& Environmental Sciences options: |  |  |
| EAST 325 | Cross-Cultural Psychology | 3 Cr . |
| EAST 345 | East Asian Social and Environmental Sciences Topics | 3 Cr . |
| EAST 390 | Topics in East Asian Studies | 3 Cr . |
| ECON 290/390 | Topics in Economics (East Asian Topics) | 3 Cr . |
| GEO 301 | Geographies of the World (Asia) | 3 Cr . |
| POLS 332 | Politics of China and East Asia | 3 Cr . |
| One of the following East Asian Religions options: |  |  |
| EAST 363 | Religions of China and Japan | 3 Cr . |
| EAST 365 | Psychology and Religion | 2 Cr . |
| and EAST 367 | Buddhist Perspectives on Psychology and Religion | 1 Cr . |
| One elective course listed in the table below |  | 3 Cr . |

Only one course in Chinese or Japanese language may be counted toward the Chinese and Japanese Studies minor.

## East Asian Studies

All EAST, FLJ, and FLC courses may be used for credit in Chinese and Japanese studies. Additional courses include:

| GEO 301 | Regional Geographies of the World (Asia) | 3 Cr . |
| :--- | :--- | :--- |
| HIST 140 | Introduction to East Asian Culture | 3 Cr . |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| PHIL 220 | Asian Philosophy | 3 Cr . |
| POLS 332 | Politics of China and East Asia | 3 Cr . |

## Approval of Schedules

All students taking a major in Chinese and Japanese Studies must have their schedules approved by their advisor at the beginning of each semester.

EAST 109, 110, 209, 210, 309 and 310 are regularly offered in China, where students attend language classes 15-18 hours per week. These credits may apply toward the general education foreign language requirement.

## East Asian Studies Courses

EAST 109 Intensive Elementary Chinese
5 Cr .
An intensive introduction to the reading, writing, and grammar of the Chinese language. Usually taken concurrently with EAST 110. Offered only in Hangzhou.

EAST 110 Intensive Elementary Chinese: Conversation 5 Cr.
An intensive course in basic Chinese conversation. Usually taken concurrently with EAST 109. Offered only in Hangzhou.

EAST 115 Cultures of China and/or Japan 3 Cr .
An introduction to the cultures of China and Japan, focusing on the traditional roots of contemporary civilization. Offered only in Hangzhou.

Intensive Advanced Chinese II
5 Cr .
An intensive course focusing on advanced training in reading and verbal expression. Usually taken concurrently with EAST 309. Regularly offered in Hangzhou. Prerequisite: FLC 204. Offered only in Hangzhou.

Cross-Cultural Psychology
5 Cr .
(Also offered as PSY 325.) An examination of the relationship between culture and the behavior of the individual, with a particular focus on human development and adaptation. Western and non-Western approaches to the topic are considered and compared with each other, and applications to mental health issues are discussed. Prerequisite: PSY 110.

EAST 340 East Asian Humanities Topics
3 Cr .
Courses with this designation will examine one or more of the following topics: East Asian literature, art, theater, philosophy, history, media, and music. The course aims to build on student's introduction to East Asian history, culture, politics, and society by delving into humanities topics focused on East Asia. The course may cover China, Japan, both, or include a broader regional focus.

EAST 345 East Asian Social and Environmental Sciences Topics
3 Cr.
Courses with this designation will examine one or more of the following topics: East Asian politics, sociology/anthropology, geography, environment, economics, psychology, and the like. The course aims to build on student's introduction to the region's history, culture, politics, and society by delving into social and environmental science topics focused on East Asia. The course may cover China, Japan, both, or include a regional focus.
EAST 363/563 Religions of China and Japan 3 Cr . (Also offered as THEO 363.) A study of the religious traditions (Confucianism, Taoism, Buddhism, and Shinto) of China and Japan. May be used to fulfill the Cultural Diversity or Upper Level Theology course component of the General Education Requirements.

EAST 365

EAST 367

EAST 382

Introduction to East Asian Culture
3 Cr .
An exploration of the main political, social, and cultural values in traditional China, Japan, Korea, and Vietnam and of the ways that they flourish today. May be used to fulfill the Cultural Diversity course component of the General Education requirements.

Intensive Intermediate Chinese 5 Cr.
An intensive course in the reading, writing, and grammar of the Chinese language. Usually taken concurrently with EAST 210. Offered only in Hangzhou.

Intensive Intermediate Chinese: Conversation 5 Cr.
An intensive course in Chinese conversation. Usually taken concurrently with EAST 209. Offered only in Hangzhou.
Intensive Advanced Chinese I 5 Cr.
An intensive course focusing on advanced training in grammar and writing. Usually taken concurrently with EAST 310. Regularly offered in Hangzhou. Prerequisite: FLC 204. Offered only in Hangzhou.
sychology and Religion
(Also offered as PSY 365.) A study of the similarities and differences between religious and psychological perspectives related to our understanding of the human person, including our development, health, and wellness. Psychological theory and research are discussed, and original source religious texts are studied from a psychological perspective in accompanying discussion sessions. Prerequisite: PSY 110. Corequisite: EAST 367.

Buddhist Perspectives on Psychology and Religion
1 Cr.
(Also offered as PSY 367.) A study of the similarities and differences between Buddhist and modern psychological understandings of the human person through study and discussion of original source Buddhist religious texts. The discussion is designed as a complement to material presented in EAST 365. Prerequisite: PSY 110. Corequisite: EAST 365.

Preparation for Standardized Test 1 Cr.
This course is designed to prepare students to take a standardized Chinese or Japanese language proficiency test such as HSK, OPT, WPI, or JLPT. Chair's approval required. S/U grade only.

| EAST 386 | Internship in Chinese and Japanese Studies <br> A formal internship in an institution in China, Japan, or the U.S. engaging in East Asia-related activities. Internships in China or Japan may require competency in the language of that country. This course requires an approved job description, an evaluation from the employers, and submission of a final written report. S/U grade. May be repeated for additional credit. Prerequisite: chair's approval required. |
| :---: | :---: |
| EAST 390 | Topics in East Asian Studies <br> A study of particular topics related to issues in East Asian culture and society. |
| EAST 395 | Chinese Culture and Civilization <br> An interdisciplinary study of key aspects of Chinese culture and civilization. Taught in English. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Offered only in China. |
| EAST 493 | East Asian Senior Seminar <br> Research in the basic cultural themes of East Asia and their impact on the world today. Prerequisite: consent of the chair of the committee. |
| EAST 495 | Supervised Reading and Research <br> Prerequisite: consent of the chair of the committee. |
| EAST 497 | Honors Work in Chinese and Japanese Studies <br> See Honors Work, page 63. |
| EAST 498 | Honors Candidacy in Chinese and Japanese Studies <br> See Honors Work, page 63. |



## Global Service

Learn more about the Global Service program at Valpo online.
Students who complete the Global Service major will have fulfilled major area requirements for the Bachelor of Arts degree under the Interdisciplinary Program option.

## Objectives

This interdisciplinary program is designed for students considering careers with international humanitarian organizations and development agencies, or students who wish to equip themselves for global service as they prepare for a different primary career. The major provides background in understanding service in social policy, in global issues, and in methods and practice of humanitarian aid.

## Bachelor of Arts - Global Service Major (Minimum 45 Cr.)

Courses with an asterisk (*) have prerequisites.

| Introductory Courses |  | 6 Cr . |
| :---: | :---: | :---: |
| INTL 150 | Global Perspectives | 3 Cr . |
| Service Learning Core |  | 18 Cr . |
| POLS 150 | International Relations | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| INTL 320 | Global Humanitarianism Examined | 3 Cr . |
| Service Issues and Theory (Two courses from the following options): |  |  |
| PSJ 201 | Principles of Peace and Social Justice | 3 Cr . |
| GS 220 | Contemporary Issues in Philanthropy and Service | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights \& Justice | 3 Cr . |
| ENGL 296 | Traditions of Giving \& Serving in American Life | 3 Cr . |
| POLS 231* | Politics of Developing States | 3 Cr . |
| THEO 345 | The Church in the World | 3 Cr . |
| THEO 353 | Studies in Theology and Practice | 3 Cr . |
| Theology of World Religions (One course from the following options or other upper-level Theology course with chair approval): |  |  |
| THEO 333 | Black Theology and Black Church | 3 Cr . |
| THEO 361 | Indian Religions and Culture | 3 Cr . |
| THEO 362 | Islamic Religion and Culture | 3 Cr . |
| THEO 363 | Religions of China and Japan | 3 Cr . |
| Regional Emphasis |  |  |
| Foreign Language appr | for the region: | 7-8 Cr. |
| French, German, or Spanish |  |  |
| One course from the following options: |  |  |
| FLF 204 | French Composition and Conversation | 4 Cr . |
| FLGR 204 | German Composition and Conversation | 4 Cr . |
| FLS 204 | Spanish Composition and Conversation | 4 Cr . |
| One elective n | red above 204 | 3-4 Cr. |
| Chinese or Japanese |  |  |
| One course from the following options: |  |  |
| FLC 203 | Intermediate Chinese I | 4 Cr . |
| FLJ 203 | Intermediate Japanese I | 4 Cr . |
| One course from the following options: |  |  |
| FLC 204 | Intermediate Chinese II | 4 Cr . |
| FLJ 204 | Intermediate Japanese II | 4 Cr . |


| Two courses with the s | egional focus as the foreign language: | 6 Cr . |
| :---: | :---: | :---: |
| Europe |  |  |
| HIST 315 | Contemporary Europe: Century of Violence | 3 Cr . |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| POLS 330 | Politics of Industrialized States | 3 Cr . |
| FLF 353 | French Texts and Society: From Romanticism to the Fifth Republic | 3 Cr . |
| FLGR 353 | German Studies: Constructing a Modern Nation | 3 Cr . |
| FLS 230 | Spanish Civilization | 4 Cr . |
| Latin America |  |  |
| One course from the following options: |  |  |
| HIST 232 | Latin American History and Society | 3 Cr . |
| HIST 329 | Revolution! Insurgence in Latin America | 3 Cr . |
| FLS 231 | Spanish-American Civilization | 4 Cr . |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| POLS 336 | Politics of Latin America | 3 Cr . |
| INTL 337 | Ethnology and History of Costa Rica | 3 Cr . |
| Africa |  |  |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| HIST 250 | African History and Society | 3 Cr . |
| HIST 350 | Colonialism and Independence: Understanding Modern Africa | 3 Cr . |
| POLS 333 | Politics of Africa | 3 Cr . |
| Namibia Study Center (appropriate course) |  |  |
| Asia |  |  |
| One course from the following options: |  |  |
| HIST 140 | Introduction to East Asian Culture | 3 Cr . |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| POLS 332 | Politics of China and East Asia | 3 Cr . |
| ECON 390 | Topics in Economics (when topic is Asia) | 3 Cr . |
| Support Core by Service Con | ration | 6 Cr . |
| Each student develops a Support Core in consultation with the Global Service advisor. The Support Core has been grouped into suggested Service Concentrations. |  |  |
| Two courses from the following: |  |  |
| Humanitarian Aid \& Service |  |  |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| ECON 236* | Contending Economic Theories | 3 Cr . |
| ECON 336* | Economics of Developing Nations | 3 Cr . |
| FLS 308 | Spanish for Service Professionals | 3 Cr . |
| POLS 352 | Model United Nations | 3 Cr . |
| POLS 231* | Politics of Developing States | 3 Cr . |
| POLS 450* | International Regimes and Global Governance | 3 Cr . |
| THEO 451 | Theology of Diaconal Ministry | 3 Cr . |
| Human Rights \& Social Justice |  |  |
| PSJ 201 | Principles of Peace and Social Justice | 3 Cr . |
| POLS 438* | Gender and Public Policy in Global Perspective | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights \& Justice | 3 Cr . |
| English as a Second Language, TESOL |  |  |
| ENGL 368 | Teaching of English to Speakers of Other Languages: Theory and Methods | 3 Cr . |
| ENGL 369 | Teaching of English to Speakers of Other Languages: Methods and Practices | 3 Cr . |


| Global Health \& Development |  |  |
| :---: | :---: | :---: |
| ECON 136 | The Economics of Health, Education, and Welfare | 3 Cr . |
| BIO 205 | Fundamental Nutrition | 3 Cr . |
| INTL 335 | Perspectives on Health Care in Costa Rica | 3 Cr . |
| THEO 346 | Studies in Theology, Health, and Healing Medical Missions | 3 Cr . |
| One course from the following options: |  |  |
| NURS 390 | Health Advocacy | 3 Cr . |
| NURS 418 | Global Health Issues | 3 Cr . |
| Service Learning Internship |  |  |
| INTL 486 | International Internship | 1-3 Cr. |
| Senior Seminar |  |  |
| INTL 493 | Senior Seminar (Offered in Fall) | 1 Cr . |
| INTL 495 | Senior Research Project (Offered in Spring) | 3 Cr . |
| Additional regional or support core courses may be approved by the chair on an ad hoc basis. |  |  |
| Global Service Complementary Major (Minimum 30 Cr.) Courses with an asterisk (*) have prerequisites. |  |  |
| Introductory Course |  |  |
| INTL 150 | Global Perspectives | 3 Cr . |
| Service Learning Core |  | 9 Cr . |
| INTL 320 | Global Humanitarianism Examined | 3 Cr . |
| Service Issues and Theory (Two courses from the following options): |  |  |
| PSJ 201 | Principles of Peace and Social Justice | 3 Cr . |
| GS 220 | Contemporary Issues in Philanthropy and Service | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| ENGL 296 | Traditions of Giving \& Serving in American Life | 3 Cr . |
| POLS 231* | Politics of Developing States | 3 Cr . |
| THEO 345 | The Church in the World | 3 Cr . |
| THEO 353 | Studies in Theology and Practice | 3 Cr . |
| Regional Emphasis |  |  |
| Foreign Language appro | for the region: | 4 Cr . |
| French, German, or Spanish |  |  |
| One course from the following options: |  |  |
| FLF 204 | French Composition and Conversation | 4 Cr . |
| FLGR 204 | German Composition and Conversation | 4 Cr . |
| FLS 204 | Spanish Composition and Conversation | 4 Cr . |
| One elective numbered above 204 |  |  |
| Chinese or Japanese |  |  |
| One course from the following options: |  |  |
| FLC 203 | Intermediate Chinese I | 4 Cr . |
| FLJ 203 | Intermediate Japanese I | 4 Cr . |
| One course from the following options: |  |  |
| FLC 204 | Intermediate Chinese II | 4 Cr . |
| FLJ 204 | Intermediate Japanese II | 4 Cr . |
| One course with the sam | egional focus as the foreign language: | 3 Cr . |
| Europe |  |  |
| HIST 315 | Contemporary Europe: Century of Violence | 3 Cr . |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| POLS 330 | Politics of Industrialized States | 3 Cr . |
| FLF 353 | French Texts and Society: From Romanticism to the Fifth Republic | 3 Cr . |
| FLGR 353 | German Studies: Constructing a Modern Nation | 3 Cr . |
| FLS 230 | Spanish Civilization | 4 Cr . |


| Latin America |  |  |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| HIST 232 | Latin American History and Society | 3 Cr . |
| HIST 329 | Revolution! Insurgence in Latin America | 3 Cr . |
| FLS 231 | Spanish-American Civilization | 4 Cr . |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| POLS 336 | Politics of Latin America | 3 Cr . |
| INTL 337 | Ethnology and History of Costa Rica | 3 Cr . |
| Africa |  |  |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| HIST 250 | African History and Society | 3 Cr . |
| HIST 350 | Colonialism and Independence: Understanding Modern Africa | 3 Cr . |
| POLS 333 | Politics of Africa | 3 Cr . |
| Namibia Study Center (appropriate course) |  |  |
| Asia |  |  |
| One course from the following options: |  |  |
| HIST 140 | Introduction to East Asian Culture | 3 Cr . |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| POLS 332 | Politics of China and East Asia | 3 Cr . |
| ECON 390 | Topics in Economics (when topic is Asia) | 3 Cr . |
| Support Core by Service Con | ration | 6 Cr. |
| Each student develops a Support Core in consultation with the Global Service advisor. The Support Core has been grouped into suggested Service Concentrations. |  |  |
| Two courses from the following: |  |  |
| Humanitarian Aid \& Service |  |  |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| FLS 308 | Spanish for Service Professionals | 3 Cr . |
| POLS 352 | Model United Nations | 3 Cr . |
| POLS 231* | Politics of Developing States | 3 Cr . |
| POLS 450* | International Regimes and Global Governance | 3 Cr . |
| THEO 451 | Theology of Diaconal Ministry | 3 Cr . |
| Human Rights \& Social Justice |  |  |
| PSJ 201 | Principles of Peace and Social Justice | 3 Cr . |
| POLS 438* | Gender and Public Policy in Global Perspective | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights \& Justice | 3 Cr . |
| English as a Second Language, TESOL |  |  |
| ENGL 368 | Teaching of English to Speakers of Other Languages: Theory and Methods | 3 Cr . |
| ENGL 369 | Teaching of English to Speakers of Other Languages: Methods and Practices | 3 Cr . |
| Global Health \& Development |  |  |
| ECON 136 | The Economics of Health, Education, and Welfare | 3 Cr . |
| BIO 205 | Fundamental Nutrition | 3 Cr . |
| INTL 335 | Perspectives on Health Care in Costa Rica | 3 Cr . |
| THEO 346 | Studies in Theology, Health, and Healing Medical Missions | 3 Cr . |
| One course from the following options: |  |  |
| NURS 390 | Health Advocacy | 3 Cr . |
| NURS 418 | Global Health Issues | 3 Cr . |
| Service Learning Internship |  |  |
| INTL 486 | International Internship | 1-3 Cr. |
| Senior Seminar |  |  |
| INTL 493 | Senior Seminar (Offered in Fall) | 1 Cr . |
| INTL 495 | Senior Research Project (Offered in Spring) | 3 Cr . |

Additional regional or support core courses may be approved by the chair on an ad hoc basis.

## International Economics and Cultural Affairs

Learn more about International Economics and Cultural Affairs at Valpo online.

Students who complete the International Economics and Cultural Affairs program will have fulfilled major area requirements for the Bachelor of Arts degree under the Interdisciplinary Program Option.

## Objectives

This interdisciplinary program, with a focus on Europe, Latin America, or Asia, is designed to provide essential background for students considering careers in the fields of international commerce or government service. To implement this goal, it provides a foundation in a modern language and the culture and customs of those who speak it, instruction in international economics, and a survey of appropriate areas of geography, history, and political science. Students interested in pursuing the International Economics and Cultural Affairs program should confer with the chair of the administrative committee. Qualified students are encouraged to consider the following Cooperative Education courses: FLF 481, FLGR 481, FLJ 481, or FLS 481.

## Bachelor of Arts - International Economics and Cultural Affairs Major (Minimum 51 Cr.)


FLC 101 Beginning Chinese I 4 Cr.
OR EAST 109 Intensive Elementary Chinese 5 Cr .
FLC 102 Beginning Chinese II 4 Cr .

OR EAST 110 Intensive Elementary Chinese: Conversation 5 Cr .
FLC 203 Intermediate Chinese I 4 Cr.

OR EAST 209 Intensive Intermediate Chinese 5 Cr .
FLC 204 Intermediate Chinese II 4 Cr .

OR EAST 210 Intensive Intermediate Chinese: Conversation 5 Cr .
HIST 140 Introduction to East Asian Culture 3 Cr .

One course from the following options:
FLJ 200 Japanese Literary Studies 3 Cr .

FLJ 250 Topics in Japanese Literature and the Fine Arts 3 Cr.
EAST 390 Topics in East Asian Studies 3 Cr.
EAST 395 Chinese Culture and Civilization 3 Cr .
French
FLF 204 French Composition and Conversation 4 Cr.
FLF 220 Approaches to French Literature 3 Cr.

FLF 306 Contemporary French Language and Communication 3 Cr .
FLF 307 Professional French 3 Cr .
FLF $353 \quad$ French Texts and Society: From Romanticism to the Fifth Republic 3 Cr.
German
FLGR 204 German Composition and Conversation 4 Cr.
FLGR 220 Approaches to German Studies 3 Cr.
FLGR 305 German in the Professions 3 Cr .
FLGR 306 German in the Media 3 Cr .

FLGR 353 German Studies: Constructing a Modern Nation 3 Cr .
Japanese
FLJ 101 Beginning Japanese I 4 Cr .
FLJ 102 Beginning Japanese II 4 Cr .
FLJ 203 Intermediate Japanese I 4 Cr.
FLJ 204 Intermediate Japanese II 4 Cr.

International Studies

| HIST 140 | Introduction to East Asian Culture | 3 Cr . |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| FLJ 200 | Japanese Literary Studies | 3 Cr . |
| FLJ 250 | Topics in Japanese Literature and the Fine Arts | 3 Cr . |
| EAST 390 | Topics in East Asian Studies | 3 Cr . |
| EAST 395 | Chinese Culture and Civilization | 3 Cr . |
| Spanish |  |  |
| FLS 204 | Spanish Composition and Conversation | 4 Cr . |
| FLS 220 | Selected Readings in Hispanic Literature | 4 Cr . |
| FLS 230 | Spanish Civilization | 4 Cr . |
| OR FLS 231 | Spanish-American Civilization | 4 Cr . |
| FLS 306 | Contemporary Hispanic Society through Communications | 3 Cr . |
| OR FLS 308 | Spanish for Service Professionals | 3 Cr . |
| FLS 307 | Professional Spanish | 3 Cr . |
| Economics |  | 15 Cr . |
| ECON 221 | Principles of Microeconomics | 3 Cr . |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| ECON 236 | Contending Economic Theories | 3 Cr . |
| ECON 326 | International Economics | 3 Cr . |
| ECON 336 | Economics of Developing Nations | 3 Cr . |
| History |  | 3 Cr . |
| One course in the appropriate world region: |  |  |
| Latin America |  |  |
| HIST 329 | Revolution! Insurgence in Latin America | 3 Cr . |
| HIST 333 | Latin America in the Cold War Era | 3 Cr . |
| HIST 235 | Modern Mexico: Competing Visions of the Nation | 3 Cr . |
| Europe |  |  |
| HIST 315 | Contemporary Europe: Century of Violence | 3 Cr . |
| Asia |  |  |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| Political Science and International Relations 6 Cr. |  |  |
| POLS 130 | Comparative Politics | 3 Cr . |
| POLS 150 | International Relations | 3 Cr . |
| Electives |  | 3 Cr . |
| One course from the following options (no electives required for the Asia emphasis): |  |  |
| GEO 201 | Economic Geography | 3 Cr . |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| GEO 470 | Political Geography | 3 Cr . |
| HIST 232 | Latin American History and Society | 3 Cr . |
| HIST 140 | Introduction to East Asian Culture | 3 Cr . |
| HIST 250 | African History and Society | 3 Cr . |
| HIST 304 | European Imperialism and the Colonial Experience | 3 Cr . |
| HIST 313 | History of Modern Britain | 3 Cr . |
| HIST 315 | Contemporary Europe: Century of Violence | 3 Cr . |
| HIST 317 | Hitler and the Third Reich | 3 Cr . |
| HIST 329 | Revolution! Insurgence in Latin America | 3 Cr . |
| HIST 333 | Latin America in the Cold War Era | 3 Cr . |
| HIST 235 | Modern Mexico: Competing Visions of the Nation | 3 Cr . |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| HIST 350 | Colonialism and Independence: Understanding Modern Africa | 3 Cr . |
| HIST 355 | Modern Middle Eastern History | 3 Cr . |
| INTL 290 | Topics in International Studies | 3 Cr . |
| INTL 390 | Advanced Topics in International Studies | 3 Cr . |
| POLS 351 | American Foreign Policy | 3 Cr . |

International Studies

| POLS 352 | Model United Nations | 3 Cr. |
| :---: | :--- | :--- |
| POLS 353 | Principles of Peace and Social Justice | 3 Cr. |
| POLS 330 | Politics of Industrialized States | 3 Cr. |
| POLS 231 | Politics of Developing States | 3 Cr. |
| POLS 332 | Politics of China and East Asia | 3 Cr. |
| POLS 333 | Politics of Africa | 3 Cr. |
| POLS 334 | Politics of the Middle East | 3 Cr. |
| POLS 336 | Politics of Latin America | 3 Cr. |
| POLS 438 | Gender and Public Policy in Global Perspective | 3 Cr. |
| POLS 454 | International Political Economy | 3 Cr. |
| POLS 450 | International Regimes and Global Governance | 3 Cr. |
| POLS 456 | War and Conflict | 3 Cr. |
| Note: Other classes may | be used with the approval of the program chair. |  |
| Senior Seminar |  |  |
| INTL 493 | Senior Seminar (senior year fall semester) | $\mathbf{1 ~ C r}$. |
| Senior Research Project |  |  |
| INTL 495 | Senior Research Project (senior year spring semester) |  |

Honors Work may be undertaken in International Economics and Cultural Affairs with appropriate approval. Students should register for Honors Work in International Economics and Cultural Affairs (IECA 497), and Honors Candidacy in International Economics and Cultural Affairs (IECA 498) (see page 63).

Any departmental major or departmental minor may be added to the International Economics and Cultural Affairs program, with the exception of an Economics minor and a Foreign Language minor.

## International Economics and Cultural Affairs Courses

| IECA 497 | Honors Work in International Economics and Cultural Affairs <br>  <br> See Honors Work, page 63. | 3 Cr. |
| :--- | :--- | :--- |
| IECA 498 | Honors Candidacy in International Economics and Cultural Affairs <br> See Honors Work, page 63. | 3 Cr. |

## Latin American/Latino Studies

Students with a Latin American/Latino Studies (LALS) Complementary Major will study the language, histories, politics, cultures, and societies of Latin America and the Latino communities in the United States.

## Objectives

The LALS interdisciplinary major is designed for students in the Humanities, Social Sciences, and professional programs who are considering careers in international business, nonprofit agencies, or government, in the United States or abroad, as well as students who foresee working with the increasing Latino population in the United States, particularly in education, ministry, nursing, or other professional or service careers.

## Latin American/Latino Studies Complementary Major (Minimum 29 Cr.)

A student fulfilling major field requirements under a Major Option in another field may present as a second major the Latin American/Latino Studies Complementary Major. Foundational and senior capstone International Studies courses, combined with applicable classes in History, Political Science, and Spanish provide a solid Latin American and Latino studies background, situated within the larger context of contemporary global issues. The number of credits required will vary depending on student placement in Spanish language courses, and by some elective choices. See detailed requirements below.

| INTL 150 | Global Perspectives | 3 Cr . |
| :---: | :---: | :---: |
| INTL 486 | International Internship | 1-3 Cr. |
| INTL 493 | Senior Seminar | 1 Cr . |
| INTL 495 | Senior Research Project | 3 Cr . |
| One course from the following options: |  |  |
| FLS 204 | Composition and Conversation | 4 Cr . |
| FLS 303 | Advanced Communication in Spanish | 3 Cr . |
| One course from the following options: |  |  |
| FLS 231 | Spanish American Civilization | 4 Cr . |
| HIST 232 | Latin American History and Society | 3 Cr . |
| One course from the following options: |  |  |
| HIST 235 | Modern Mexico: Competing Visions of the Nation | 3 Cr . |
| HIST 225 | Alternate Perspectives of United States History (when Latino) | 3 Cr . |
| One course from the following options: |  |  |
| POLS 336 | Politics of Latin America | 3 Cr . |
| POLS 490 | Advanced Topics in Political Science II (when Latino politics) | 3 Cr . |
| Electives ${ }^{\text {3 }}$ |  |  |
| One course from the following options: |  |  |
| FLS 200 | Hispanic Literary Studies | 3 Cr . |
| FLS 231 | Spanish American Civilization | 4 Cr . |
| FLS 306 | Contemporary Hispanic Society through Communications | 3 Cr . |
| FLS 308 | Spanish for Service Professionals | 3 Cr . |
| FLS 390 | Seminar in Spanish (when Latin American or Latino) | 3 Cr . |
| One course from the following options: |  |  |
| HIST 225 | Alternate Perspectives of United States History (when Latino) | 3 Cr . |
| HIST 232 | Latin American History and Society | 3 Cr . |
| HIST 329 | Revolution! Insurgence in Latin America | 3 Cr . |
| HIST 333 | Latin America in the Cold War Era | 3 Cr . |
| HIST 235 | Modern Mexico: Competing Visions of the Nation | 3 Cr . |
| HIST 390 | Topics in History (when Latin American or Latino) | 3 Cr . |
| HIST 393 | History through Film (when Latin American or Latino) | 3 Cr . |
| INTL 337 | The Ethnology and History of Costa Rica [on site] | 3 Cr . |
| One course from the following options: |  |  |
| POLS 359 | Study Abroad Field Research (when in Latin America) | 3 Cr . |
| POLS 336 | Politics of Latin America | 3 Cr . |
| POLS 490 | Advanced Topics in Political Science II (when Latino politics) | 3 Cr . |
| INTL 335 | Perspectives on Health Care in Costa Rica [on site] | 3 Cr . |

[^2]
## Middle East Studies

## Objectives

The Middle East Studies minor is an interdisciplinary program that will introduce students to a range of Middle Eastern cultures, languages, and viewpoints, from the classical to the contemporary periods. While fluency in Arabic or Hebrew is not required, language study is a requirement for the Middle East Studies minor. In addition to language study, the minor requires courses in theology, the social sciences, and the humanities to present students with a range of perspectives and methodologies relevant to the study of the Middle East. Study Abroad in the Middle East is recommended.

## Middle East Studies Minor (Minimum 18 Cr.)

| One of the following groups: |  |  |
| :---: | :---: | :---: |
| Arabic |  |  |
| INTL 290 | Topics in International Studies: Beginning Arabic I | 3 Cr . |
| INTL 290 | Topics in International Studies: Beginning Arabic II | 3 Cr . |
| Hebrew |  |  |
| FLH 101 | First Semester Hebrew | 4 Cr . |
| FLH 102 | Second Semester Hebrew | 4 Cr . |
| HIST 355 | Modern Middle East History | 3 Cr . |
| THEO 362 | Islamic Religion \& Culture | 3 Cr . |
| ENGL 203 | Middle Eastern Literatures | 3 Cr . |
| One courses from the following options: |  |  |
| COMM 291 | Topics in World Cinema (when Middle Eastern) | 3 Cr . |
| ENGL 204 | Middle Eastern Cinemas | 3 Cr . |
| ENGL 490 | Topics in English (when Middle Eastern) | 3 Cr . |
| FLH 495 | Supervised Reading and Research in Hebrew | 1-2 Cr. |
| HIST 390 | Topics in History (when Middle Eastern) | 3 Cr . |
| INTL 390 | Advanced Topics in International Studies | 3 Cr . |
| INTL 486 | International Internship | 3 Cr . |
| POLS 334 | Politics of the Middle East | 3 Cr . |
| THEO 368 | Topics in Abrahamic Religions (when Middle Eastern) | 3 Cr . |
| THEO 490 | Topics in Theology (when Middle Eastern) | 3 Cr . |
| Relevant Study Abroad course in the Middle East |  |  |

## Kinesiology

## Associate Professors Helm, Rolling, Tyree (chair); Assistant Professor A. Simpson; Lecturer J. Stangel; Adjunct Instructors Daugherty, Seibert.

The Department of Kinesiology seeks to provide students with knowledge and skills designed to enhance the quality of campus life as well as to provide them with suitable basic experiences for lifelong personal use.

The Department of Kinesiology provides comprehensive undergraduate degree programs that incorporate scientific and professional methods of inquiry to study physical activity, exercise, sports, and health related issues; advances the body of knowledge through scholarly inquiry; and offers a wide range of fitness and sport activities that help promote lifelong well-being.

Bachelor of Science in Physical Education Physical Education Major (Minimum 32 Cr.)

| KIN 150 | Foundations of Physical Education and Sport | 3 Cr . |
| :---: | :---: | :---: |
| KIN 275 | Methods of Teaching Fitness | 2 Cr . |
| KIN 289 | Methods of Teaching Elementary Physical Education | 2+2, 3 Cr . |
| KIN 315 | Teaching of Team Sports | 3 Cr . |
| KIN 325 | Teaching of Individual and Dual Sports | 3 Cr . |
| KIN 360 | Adapted Physical Education | 3 Cr . |
| KIN 370 | Kinesiology I | $3+2,4 \mathrm{Cr}$. |
| KIN 440 | Physiology of Exercise | 2+2, 3 Cr . |
| One course from the following options: |  |  |
| KIN 340 | Motor Learning | 2+2, 3 Cr . |
| KIN 387 | Fitness Assessment and Exercise Prescription | 3 Cr . |
| Two courses from the following options: |  |  |
| KIN 155 | Dance Patterns and Forms | 2 Cr . |
| KIN 165 | Gymnastics | 1+2, 2 Cr . |
| KIN 270 | Teaching Swimming | 2 Cr . |
| Additional Required Courses |  |  |
| BIO 151 | Human Anatomy and Physiology I | 3+3, 4 Cr. |
| BIO 152 | Human Anatomy and Physiology II | $3+3,4 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| BIO 205 | Fundamental Nutrition | 3 Cr . |
| BIO 260 | Human Nutrition | 3 Cr . |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 111 | Laboratory in General Experimental Psychology | 0+2.5, 1 Cr . |

## Bachelor of Science in Physical Education

Physical Education Teacher Education Major: P-12 (Minimum 51 Crı)
Students who plan to teach in the elementary or secondary schools with a major or minor in Physical Education Teacher Education must also complete a complementary major in Secondary Education.

| KIN 150 | Foundations of Physical Education and Sport | 3 Cr. |
| :--- | :--- | ---: |
| KIN 155 | Dance Patterns and Forms | 2 Cr. |
| KIN 165 | Gymnastics | $1+2,2 \mathrm{Cr}$. |
| KIN 190 | First Aid and CPR | 2 Cr. |
| KIN 230 | Seminar in Health | 3 Cr. |
| KIN 231 | Substance Abuse and Health | 3 Cr. |
| KIN 270 | Teaching Swimming | 2 Cr. |
| KIN 275 | Methods of Teaching Fitness | 2 Cr. |
| KIN 289 | Methods of Teaching Elementary Physical Education | $2+2,3 \mathrm{Cr}$. |
| KIN 315 | Teaching of Team Sports | 3 Cr. |


| KIN 325 | Teaching of Individual and Dual Sports | 3 Cr . |
| :---: | :---: | :---: |
| KIN 340 | Motor Learning | 2+2, 3 Cr . |
| KIN 360 | Adapted Physical Education | 3 Cr . |
| KIN 370 | Kinesiology I | 3+2, 4 Cr . |
| KIN 388 | Methods of Teaching Health K-12 | 3 Cr . |
| KIN 489 | Methods of Teaching Secondary Physical Education | 2+2, 3 Cr . |
| One course from the following options: |  |  |
| KIN 191 | First Aid Instructor Certification | 1 Cr. |
| KIN 192 | Care and Prevention of Sport Injuries | 1 Cr . |
| One course from the following options: |  |  |
| KIN 372 | Kinesiology II | 2+2, 3 Cr . |
| KIN 387 | Fitness Assessment and Exercise Prescription | 3 Cr . |
| KIN 440 | Physiology of Exercise | 2+2, 3 Cr . |
| One course from the following options: |  |  |
| KIN 228 | Stress Management and Prevention | 3 Cr . |
| HCL 304 | Introduction to Epidemiology | 3 Cr . |
| PSY 235 | Abnormal Psychology | 3 Cr . |
| Additional Required Courses ${ }^{4}$ |  |  |
| BIO 151 | Human Anatomy and Physiology I | 3+3, 4 Cr. |
| BIO 152 | Human Anatomy and Physiology II | 3+3, 4 Cr . |
| One course from the following options: |  |  |
| BIO 205 | Fundamental Nutrition | 3 Cr . |
| BIO 260 | Human Nutrition | 3 Cr . |
| COMM 243 | Public Communication | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| Education Courses |  |  |
| ED 206 | School and Society | 3 Cr . |
| ED 304 | Educational Psychology | 3+0, 3 Cr . |
| ED 350 | Seminar: Introduction to the Profession of Teaching | 0 Cr . |
| ED 357 | Designing Curriculum, Assessment, and Learning Plans | 3 Cr . |
| ED 360 | Literacies Across the Content Areas | 3 Cr . |
| ED 367 | English Language Learning Methods | 3 Cr . |
| ED 451 | Seminar: Efficacy in Professional Practice | 1 Cr . |
| ED 452 | Seminar: Praxis Reflection | 1 Cr . |
| ED 459 | Supervised Teaching in the Secondary School Subjects | 12 Cr . |
| ED 470 | Diversity, Equity, and Education | 3 Cr . |
| SPED 440 | Learning Exceptionalities | 3 Cr . |
| Students must also complete an application for formal admission into the Teacher Education program in the Education Department. See the Education Department's portion of the catalog (page 119) for more information on the complementary Secondary Education major. |  |  |

[^3]| Bachelor of Science - Exercise Science Major (Minimum 28 Cr.) |  |  |
| :---: | :---: | :---: |
| KIN 150 | Foundations of Physical Education and Sport | 3 Cr . |
| KIN 220 | Coaching Theory | 2 Cr . |
| KIN 370 | Kinesiology I | $3+2,4 \mathrm{Cr}$. |
| KIN 372 | Kinesiology II | 2+2, 3 Cr . |
| KIN 373 | Research Seminar in Kinesiology | 1 Cr . |
| KIN 415 | Research Methods in Physical Education and Sport | 3 Cr. |
| KIN 440 | Physiology of Exercise | $2+2,3 \mathrm{Cr}$. |
| KIN 473 | Kinesiology Senior Project | 3 Cr . |
| KIN 477 | Advanced Physiology of Exercise | 3 Cr . |
| One course from the following options: |  |  |
| KIN 340 | Motor Learning | 2+2, 3 Cr . |
| KIN 387 | Fitness Assessment and Exercise Prescription | 3 Cr . |
| Additional Required Courses ${ }^{5}$ |  |  |
| BIO 151 | Human Anatomy and Physiology I | 3+3, 4 Cr . |
| BIO 152 | Human Anatomy and Physiology II | $3+3,4 \mathrm{Cr}$. |
| PHYS 111 | Essentials of Physics | 3 Cr . |
| PSY 235 | Abnormal Psychology | 3 Cr . |
| One course from the following options: |  |  |
| CHEM 111 | Introduction to Chemistry | $3+2,4 \mathrm{Cr}$. |
| CHEM 121 | General Chemistry I | $3+3,4 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| STAT 140 | General Statistics | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| One course from the following options: |  |  |
| BIO 205 | Fundamental Nutrition | 3 Cr. |
| BIO 260 | Human Nutrition | 3 Cr . |
| One minor from the following options: |  |  |
| Chemistry Minor |  |  |
| Human Biology Minor |  |  |

Bachelor of Arts - Sports Management Major (Minimum 36 Cr.)

| KIN 150 | Foundations of Physical Education and Sport | 3 Cr . |
| :---: | :---: | :---: |
| KIN 220 | Coaching Theory | 2 Cr . |
| KIN 233 | Theory and Principles of Sports Management | 3 Cr . |
| KIN 240 | Governance in Sports and Physical Education | 3 Cr . |
| KIN 310 | Psychology of Sport | 3 Cr . |
| KIN 320 | Sport and Society | 3 Cr . |
| KIN 333 | Management and Development of Facilities | 3 Cr . |
| KIN 343 | Sports Marketing, Promotions and Fund Raising | 3 Cr . |
| KIN 386 | Internship Seminar | 1 Cr . |
| KIN 433 | Sports Law and Sports Ethics | 3 Cr . |
| KIN 443 | Financial Aspects of Sport | 3 Cr . |
| KIN 486 | Internship in Sport Management or Exercise Science (6 Cr.) | 1-6 Cr. |
| Additional Required Courses |  |  |
| COMM 265 | Public Relations Principles | 3 Cr . |
| ENGL 210 | Introduction to Business and Professional Writing | 3 Cr . |
| Business Administration Minor |  | 27 Cr . |

[^4]Physical Education Minor (Minimum 18 Cr.)

| KIN 150 | Foundations of Physical Education and Sport | 3 Cr |
| :--- | :--- | ---: |
| KIN 190 | First Aid and CPR | 2 Cr |
| KIN 230 | Seminar in Health | 3 Cr. |
| KIN 370 | Kinesiology I | $3+2,4 \mathrm{Cr}$. |

Coaching Education Minor (Minimum 17 Cr.)

| KIN 190 | First Aid and CPR | 2 Cr . |
| :---: | :---: | :---: |
| KIN 192 | Care and Prevention of Sport Injuries | 1 Cr . |
| KIN 220 | Coaching Theory | 2 Cr . |
| KIN 221 | Coaching Techniques | 1 Cr . |
| KIN 310 | Psychology of Sport | 3 Cr . |
| KIN 370 | Kinesiology I | $3+2,4 \mathrm{Cr}$. |
| KIN 387 | Fitness Assessment and Exercise Prescription | 3 Cr . |
| Additional Required Courses |  |  |
| One course from the following options |  |  |
| BIO 205 | Fundamental Nutrition | 3 Cr . |
| BIO 260 | Human Nutrition | 3 Cr . |

Exercise Science Minor (Minimum 15 Cr.)

| KIN 150 | Foundations of Physical Education and Sport | 3 Cr . |
| :---: | :---: | :---: |
| KIN 220 | Coaching Theory | 2 Cr . |
| KIN 370 | Kinesiology 1 | $3+2,4 \mathrm{Cr}$. |
| KIN 387 | Fitness Assessment and Exercise Prescription | 3 Cr . |
| KIN 440 | Physiology of Exercise | 2+2, 3 Cr . |
| KIN 477 | Advanced Physiology of Exercise | 3 Cr . |
| Additional Required Courses |  |  |
| One course from the following options: |  |  |
| BIO 205 | Fundamental Nutrition | 3 Cr . |
| BIO 260 | Human Nutrition | 3 Cr . |


| KIN 190 | First Aid and CPR | 2 Cr . |
| :---: | :---: | :---: |
| KIN 230 | Seminar in Health | 3 Cr . |
| KIN 231 | Substance Abuse and Health | 3 Cr . |
| KIN 388 | Methods of Teaching Health K-12 | 3 Cr . |
| One course from the following options: |  |  |
| KIN 191 | First Aid Instructor Certification | 1 Cr. |
| KIN 192 | Care and Prevention of Sport Injuries | 1 Cr . |
| Additional Required Courses |  |  |
| One course from the following options: |  |  |
| BIO 205 | Fundamental Nutrition | 3 Cr . |
| BIO 260 | Human Nutrition | 3 Cr . |

Sport Management Minor (Minimum 24. Cr.)

| KIN 233 | Theory and Principles of Sports Management | 3 Cr . |
| :---: | :---: | :---: |
| KIN 333 | Management and Development of Facilities | 3 Cr . |
| KIN 343 | Sports Marketing, Promotions and Fund Raising | 3 Cr . |
| KIN 433 | Sports Law and Sports Ethics | 3 Cr . |
| KIN 443 | Financial Aspects of Sport | 3 Cr . |
| One course form the following options: |  |  |
| KIN 240 | Governance in Sports and Physical Education | 3 Cr . |
| KIN 310 | Psychology of Sport | 3 Cr . |
| KIN 320 | Sport and Society | 3 Cr . |
| Additional Required Courses |  |  |
| ACC 205 | Financial Accounting | 3 Cr . |
| ECON 221 | Principles of Microeconomics | 3 Cr . |

## Degree

Completion of the degree requirements of the College of Arts and Sciences with a major in physical education leads to the Bachelor of Science in Physical Education degree. The Sports Management, Exercise Science, and Teacher Education majors are noted on students' transcript as Physical Education: Sports Management, Physical Education: Exercise Science, and Physical Education: Teacher Education.

## Approval of Schedules

All students pursuing a major or minor in the department, and all students who plan to achieve certification in the teaching of physical education, must have their schedules approved by the chair of the department or a departmental advisor before each registration period.

## Basic Courses in Kinesiology

All students must take one credit hour of KIN 100 Healthy Lifestyles or KIN 101 Wellness and Stress. Anyone who has served in the Armed Forces for at least one year is exempted from this requirement, with the exception of National Guard members.

No more than four credit hours earned in KIN 102-149 may be counted toward any degree.

## Kinesiology Courses

This course is designed for freshmen (and transfer students) and should be taken during their first year of attendance at Valparaiso University. The course is aimed at promoting a concern in each student for their current level of health and physical fitness. The correlation between healthful practices and future physical, mental, and emotional well-being is emphasized. Students may take either KIN 100 or KIN 101 for general education credit.

KIN 101 Wellness and Stress 1 Cr.
This course is designed for freshmen (and transfer students) and should be taken during their first year of attendance at Valparaiso University. This course is aimed at helping students understand and identify the body's reaction to various types of stress. Students will learn about various stressors unique to the college environment. Additionally, students will learn a variety of ways to deal with stress, including coping skills and stress management techniques. The class will include a physical activity component. Students may take either KIN 100 or KIN 101 for general education credit.

KIN 102-149 Elective Activities
$0+1,0.5 \mathrm{Cr}$.
Individual, dual, team, indoor, and outdoor activities are presented in various combinations. A specific activity may not be repeated for credit. Each course meets twice a week for seven weeks. S/U grade.

KIN 150
Foundations of Physical Education and Sport
3 Cr .
This course examines the history, philosophy, and principles of physical education as a profession and its relationship to modern education. This course is designed to provide the students with an enhanced knowledge of the field of physical education, including its growth and development, merging trends, and critical factors.

KIN 155
2 Cr .
A study of dance with emphasis on modern, folk, social, and square dance forms as well as teaching techniques.

Advanced Lifesaving/Lifeguarding
$1+2,2 \mathrm{Cr}$.
Analysis and practice of skills in swimming and lifesaving which lead to an American Red Cross Advanced Lifesaving Certificate. Mini or Summer Session only.

Gymnastics
$1+2,2 \mathrm{Cr}$.
This course consists of methods and teaching cues of apparatus and tumbling techniques. May meet three times a week.

First Aid and CPR
2 Cr.
Seven week course. A study of the prevention and emergency care of sudden illness and injury. Completion of this course leads to American Red Cross Certification in Advanced First Aid Responding to Emergencies and Community CPR.

First Aid Instructor Certification
1 Cr .
This course is a continuation of KIN 190, First Aid and CPR, and is designed for students who want to complete fundamental training to become first aid instructors.

Care and Prevention of Sport Injuries
1 Cr .
This course will provide an overview of basic principles of athletic training for those who aspire to be physical education teachers and coaches. This course will prepare students to provide basic health care to athletes.

2 Cr.
Seven week course. This course includes a study of the methods associated with the planning, periodization, peaking, and bio-motor development in coaching. Students will develop a comprehensive seasonal plan for a specific sport. Physical Education majors/minors given registration priority; approval of the chair of the department required for non-majors.

Coaching Techniques
1 Cr .
An in-depth study of a sport and the coaching techniques that lead to a successful program. Sports may include basketball, baseball, football, soccer, softball, swimming, tennis, and volleyball. May be repeated for credit in a different sport.
Stress Management and Prevention Methods
3 Cr.
This course is designed to teach students the basic principles, theories, and relaxation techniques to effectively manage personal stress. Students will gain a greater understanding of the mind-body relationship, learn to employ a holistic approach to stress, and adopt effective cognitive techniques, coping skills, and relaxation techniques.
Seminar in Health 3 Cr.
A study of the human body in health and disease. Included are discussions of major American health concerns, their incidence, and prevention.
Substance Abuse and Health
3 Cr .
A study of substance use and abuse in the United States. The course will examine the effects of alcohol, tobacco, and other drugs on the mental, physical, and social well-being of the individual.

Stress Management Module I
1 Cr .
This course provides a basic understanding of stress and its physical, psychological, and social effects. Topics for Module I include: illness/disease; and intrapersonal, interpersonal, and perceptions intervention. Students may take up to three modules per class. Specific modules may not be repeated for credit.

Theory and Principles of Sports Management 3 Cr .
This is the foundations course for the Sports Management concentration. The course includes a study of the sports enterprise and the management function within these settings. Students are exposed to basic organizational and problem-solving techniques.
Stress Management Module II
1 Cr .
This course provides a basic understanding of stress and its physical, psychological, and social effects. Topics for Module II include: the relationships between stress and change; self-evaluation; sources of stress; and current coping skills for handling stress including spirituality, meditation, autogenic training, progressive muscle relaxation, and biofeedback. Students may take up to three modules per class. Specific modules cannot be repeated for credit. Prerequisite: KIN 232.

Teaching of Team Sports
3 Cr .
This course will prepare students to teach a variety of team sports, including, but not restricted to football, soccer, baseball, softball, volleyball, and basketball. Students will be involved in teaching basic skills, drills, lead-up games, and game play. Rules, regulations, history, and officiating will also be taught.
This course provides a basic understanding of stress and its physical, psychological, and social effects. Module III covers the following topics: physiological interventions; behavior; diversity; occupational stress; college stress; and family and the elderly stress. Students may take up to three modules per class. Specific modules cannot be repeated for credit. Prerequisite: KIN 234.

## Governance in Sports and Physical Education

3 Cr
This course is an examination of sport organizations focused on both professional and amateur governance structures and processes. The study of policy in educational, non-profit, and professional sport venues will also be addressed.

Medical Terminology 3 Cr .
This course prepares students to gain proficiency in both the spoken and written communication with the medical language used by health professionals. Course may be useful for students in Kinesiology, Nursing, and any of the Allied Health fields. This course may not be used to fulfill a major requirement. Prerequisite: BIO 151 or BIO 380.

## Teaching Swimming

A study of techniques for teaching swimming and basic lifesaving. This course leads to certification in one of the currently recognized training programs for swimming instructors.

Kinesiology Sophomore Research
1 Cr .
Team investigation of a specific area in the field Kinesiology and/or Exercise Science. Students complete team research tasks common to the field and conclude the experience with a written report. Prerequisites: a formal application to the director of exercise science. Graded S/U.

Kinesiology Junior Research
1 Cr .
Team investigation of a specific area in the field Kinesiology and/or Exercise Science. Students complete team research tasks common to the field and conclude the experience with a written report. Prerequisites: a formal application to the director of exercise science. Graded S/U.

Methods of Teaching Fitness 2 Cr.
Methods and materials for designing and implementing fitness instruction and assessment in the K-12 school setting. Topics include: effects of physical activity and inactivity, current fitness assessment procedures, principles and guidelines for developing health related and skill related fitness, and providing a safe learning environment.

Methods of Teaching Elementary Physical Education 2+2, 3 Cr.
Focuses on planning, teaching, and evaluating a developmental physical education program for elementary students. Includes lab experiences designed to enhance planning, management, and teaching skills. Course is designed for physical education teacher education major. Prerequisite: sophomore standing.

Special Topics in Recreation and Leisure Studies $\quad$ 1-3 Cr.
An open topic course which may investigate various topics pertaining to recreational and leisure programs (e.g., organization of intramural programs, adult fitness, outdoor recreation program management, pool management, SCUBA).

Psychology of Sport
3 Cr .
A study of the competitive sports experience, with emphasis on the multidimensional factors involved in the psychology of sport. Physical Education majors/ minors given registration priority; approval of the chair of the department required for non-majors. Prerequisite: PSY 110.

Sport and Society 3 Cr.
A study of the role of sports in society and the effects of culture and society on sports.
Teaching of Individual and Dual Sports 3 Cr.

This course will prepare students to teach a variety of dual and individual sports, including, but not restricted to golf, badminton, tennis, racquetball, and pickle ball. Students will be involved in teaching basic skills, drills, lead-up games, and game play. Rules, regulations, history, and officiating will also be taught.

## KIN 333

The course explores planning, developing, and managing sports facilities. Students examine existing facilities and plan for the development and management of new sports facilities.

## Motor Learning

$2+2,3 \mathrm{Cr}$.
This course will expose students to the theoretical perspectives and current principles associated with the control and learning of movement skills. Specifically, the neural and mechanical mechanisms underlying motor behavior and the variables influencing motor learning will be addressed. The course will have applications to kinesiology, exercise science, adapted physical education, and both elementary and secondary physical education.

Sports Marketing, Promotions and Fund Raising
3 Cr .
A study of the roles of marketing, promotions, and fund raising in the sports enterprise. Students are involved in planning and organizing programs in these areas. Students also receive experience in implementing a group project on campus or in a community setting.

Fitness Assessment and Exercise Prescription
3 Cr .
Introduction to physiological testing protocols, fitness evaluations, and the design of exercise prescriptions based on direct and indirect measures, e.g., oxygen uptake, heart rate, caloric expenditure. Areas of study include but are not limited to cardiac rehabilitation, COPD, diabetes, pregnancy, youth, and the elderly. Prerequisite: BIO 151, 152 or approval of the instructor.

Methods of Teaching Health K-12
An introduction to the content and methods of health education. The course will survey basic wellness issues such as nutrition, fitness, sexuality, drug abuse, and chronic and communicable disease prevention. The theory and practice of health education programs at the K-12 levels are discussed, including the use of a variety of methods and the development of relevant materials.

An introduction to the theory and methods of historical, descriptive, and experimental research in physical education and sport. Topics include the nature of research, interpretation of data, and design of research. Recommended for juniors in exercise science and others considering graduate study. Prerequisites: junior standing and one of PSY 201, STAT 140, STAT 240, or IDS 205.
KIN $433 \quad$ Sports Law and Sports Ethics 3 Cr . This course provides an extensive overview of legal principles and ethical issues in sports. Included will be a broad range of issues related to sports law (such as antitrust exemption, labor law, and the athlete/agent relationship). The course concludes with a study of the role and application of ethics in decision-making processes. Prerequisite: Junior standing or chair's approval.

An investigation of the physiological response of the human body to exercise and training, with laboratory experience. Prerequisite: BIO 152.

Financial Aspects of Sport
3 Cr.
This course provides the sports management student with information concerning the basic theories of finance and economics in areas of sports management. Included are forms of ownership, taxation, financial analysis, feasibility studies, licensing, and economic impact studies. Prerequisite: ECON 221 or ACC 205.

Kinesiology Senior Project
3 Cr .
A personal investigation of a specific area in the field of Physical Education, Sports Management, or Exercise Science. Students utilize research techniques common to the field and culminate the experience with a written report. Prerequisites: KIN 373, Senior standing, and approval of the chair of the department.

Advanced Physiology of Exercise
3 Cr .
Critical review of the most current exercise science literature. Topics include biochemistry of exercise, carbohydrate metabolism, ergogenic aids, muscle physiology, endocrine physiology, and cardiac rehabilitation. Prerequisites: KIN 370, KIN 387, KIN 440, CHEM 111 or CHEM 121, or approval of the instructor.

## Sport Nutrition

3 Cr .
This course explores the intricacies of improving sport performance through adjustments in dietary practices, and prepares students for sport nutrition certification. Perquisites: BIO 151, BIO 152, BIO 205 or BIO 260, KIN 440, or instructor approval.

Principles of Strength and Conditioning
3 Cr .
This course focuses on the scientific principles of physical conditioning through resistance and cardiovascular training. Emphasis will be placed on physiological adaptations to exercise, anaerobic and aerobic training, exercise technique, program design, and testing and evaluation. Additionally, this course is designed to prepare students for national certification in strength and conditioning. Prerequisites: BIO 151, BIO 152, KIN 387, KIN 440, or instructor approval.

Internship in Sport Management or Exercise Science
1-6 Cr.
An opportunity for students to gain practical experience under careful supervision by working in University programs or offices, public agencies or businesses, sport clubs, sports medicine clinics, community or adult fitness programs, high schools, media and communications, programs for the elderly, athletic administration, intramural and facility management, or other appropriate work experiences. Objectives, evaluations and procedures for the conduct of the course are jointly planned by the student, the instructor, and the program supervisor. Exercise science majors must complete a minimum of 3 internship credits; sports management majors must complete a minimum of 6 internship credits. This course may be repeated for a maximum of 12 credit hours. Prerequisites: junior standing, KIN 386 (Sports Management majors only), and approval of the instructor and the chair of the department.

## Methods of Teaching Secondary Physical Education

$2+2,3 \mathrm{Cr}$
Focuses on planning, teaching, and evaluating a developmental physical education program for middle school and high school students. Includes lab experiences designed to enhance planning, management, and teaching skills. Course is designed for physical education: teacher education major. Prerequisite: junior standing.

A personal investigation of a research oriented concern pertaining to kinesiology. This course may be repeated for a maximum of six credit hours. Prerequisite: approval of the instructor and consent of the chair of the department.

See Honors Work, page 63.
KIN $498 \quad$ Honors Candidacy in Kinesiology
See Honors Work, page 63.


## Mathematics and Statistics

Learn more about the Department of Mathematics and Statistics at Valpo online.
Professors Gillman, Szaniszlo; Associate Professors A. Capaldi, M. Capaldi, Desjarlais, Drube, Gong, Luther (chair), Maxin, Pudwell, Sullivan; Assistant Professors Beagley, Kolba, Schmitt; Lecturers Cath, Haines.

## Mathematics

Mathematics is the disciplined form of communication which serves both to lend structure to scientific, engineering, and economic principles, and to provide a beauty of formalism in its own right. It is characteristic that many important mathematical discoveries have been made by scientists, while at the same time pure mathematics has opened up unexpected new advances in science.

Careers in mathematics include statistical analysis, education, scientific, industrial, and mathematical research, operations research, and actuarial science.

## Mathematics Major (Minimum 38 Cr.)

| Core |  |  |
| :---: | :---: | :---: |
| MATH 131 | Calculus I | 3+2, 4 Cr . |
| MATH 132 | Calculus II | 3+2, 4 Cr . |
| MATH 253 | Calculus III | 4 Cr . |
| MATH 264 | Linear Algebra | 3 Cr . |
| MATH 266 | Transitions in Mathematics | 3 Cr . |
| MATH 199 | Mathematics Colloquium I | 0 Cr . |
| MATH 299 | Mathematics Colloquium II | 0 Cr . |
| MATH 399 | Mathematics Colloquium III | 1 Cr . |
| MATH 499 | Mathematics Colloquium IV | 1 Cr . |
| Electives |  |  |
| Three courses from the following options: |  |  |
| MATH 421 | Combinatorics I | 3 Cr . |
| MATH 422 | Combinatorics II | 3 Cr . |
| MATH 451 | Analysis I | 3 Cr . |
| MATH 452 | Analysis II | 3 Cr . |
| MATH 453 | Topology | 3 Cr . |
| MATH 461 | Abstract Algebra I | 3 Cr . |
| MATH 462 | Abstract Algebra II | 3 Cr . |
| Three additional MATH or STAT courses of $\mathbf{3}$ credits or more numbered 270 or above. For students with a second major in Secondary Education, two of these courses must be MATH 312 and MATH 314. |  |  |
| Additional Required Courses |  |  |
| One statistics course from the following options |  |  |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| CE 202 | Statistical Applications in Civil Engineering | 3 Cr . |
| Note: The preferred statistics course is STAT 240. |  |  |
| One computing course from the following options: |  |  |
| CS 156 | Fundamentals of Programming | 2+2, 3 Cr . |
| CS 157 | Algorithms and Programming | 2+3, 3 Cr . |
| Note: Mathematics majors are strongly encouraged to take CS 158. |  |  |

## Degree

Completion of the degree requirements of the College of Arts and Sciences with a major in mathematics leads to a Bachelor of Arts or a Bachelor of Science degree. A student having a mathematics major in view should begin mathematics in the freshman year.

## Mathematics Complementary Major (Minimum 32 Cr.)

A student with a first major in another discipline may take a complementary major in mathematics.

| Core |  |  |
| :---: | :---: | :---: |
| MATH 131 | Calculus I | 3+2, 4 Cr. |
| MATH 132 | Calculus II | $3+2,4 \mathrm{Cr}$. |
| MATH 253 | Calculus III | 4 Cr . |
| MATH 264 | Linear Algebra | 3 Cr . |
| MATH 266 | Transitions in Mathematics | 3 Cr . |
| MATH 199 | Mathematics Colloquium I | 0 Cr . |
| MATH 299 | Mathematics Colloquium II | 0 Cr . |
| MATH 399 | Mathematics Colloquium III | 1 Cr . |
| MATH 499 | Mathematics Colloquium IV | 1 Cr . |
| Electives |  |  |
| One course from the following options: |  |  |
| MATH 421 | 1 Combinatorics I | 3 Cr . |
| MATH 451 | 1 Analysis I | 3 Cr . |
| MATH 461 | 1 Abstract Algebra I | 3 Cr . |
| Three additional MATH or STAT courses of $\mathbf{3}$ credits or more numbered $\mathbf{2 7 0}$ or above |  |  |
| Additional Required Course |  |  |
| One statistics course from the following options |  |  |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| CE 202 | Statistical Applications in Civil Engineering | 3 Cr . |
| Note: The preferred statistics course is STAT 240. |  |  |
| Mathematics Minor (Minimum 15 Cr.) |  |  |
| One course from the following options: |  |  |
| MATH 213 | Mathematics for Elementary Teachers I | 4 Cr . |
| MATH 220 | Discrete Mathematics | 3 Cr . |
| MATH 264 | Linear Algebra | 3 Cr . |
| MATH 266 | Transitions in Mathematics | 3 Cr . |
| OR any other MATH course numbered 300 or above |  |  |
| One additional MATH or STAT course of at least 3 credits numbered 213 or above |  |  |
| Seven to nine additional credits in MATH or STAT courses except MATH 110, MATH 111, and MATH 115 |  |  |

See page 371 for a description of the Applied Statistics Minor.

## Teaching Programs

Students who plan to teach mathematics in middle or secondary schools with a major or minor in Mathematics should consult the chair of the department and the Education Department for specific requirements.

## Cooperative Education

Qualified students may combine semesters of professional experience with other semesters of traditional academic studies, usually lengthening their college education beyond the normal eight semesters. During the semesters of their employment, students are financially reimbursed by the cooperating employer and receive college credit. This program normally commences at the end of the sophomore year and consists of two semesters plus three summers of full time employment with the same company. Two credits in mathematics are granted for each semester and one for each summer. These credits may not be counted toward the minimum required for the major and cannot replace a required course, with the exception of MATH 399/499. To qualify, students must possess a minimum 2.50 cumulative grade point average and a 2.50 grade point average in all required Mathematics courses taken prior to participation in the program.

## Statistics

Statistics is the science of collecting, organizing, and interpreting data. The goal of statistics is not to merely perform computations and make graphs with data, but to learn from data. Understanding statistics, including its misuses and limitations, is a critical component of being an informed citizen in our increasingly data-driven world.

A major in statistics provides students with a foundation in statistical theory, but focuses on how to appropriately conduct statistical analyses in real applications. Careers in statistics include a wide array of fields, such as medicine, public health, manufacturing, marketing, finance, and government positions.

## Bachelor of Arts - Statistics Major (Minimum 28 Cr.)

Introductory Statistics Course One course from the following options

| STAT 140 | General Statistics | 3 Cr. |
| :--- | :--- | :--- |
| STAT 240 | Statistical Analysis | 3 Cr. |

PSY 201 Statistical Methods 3 Cr .
IDS 205 Business Statistics 3 Cr .
CE 202 Statistical Applications in Civil Engineering 3 Cr .

Note: The preferred statistics course is STAT 240.
Intermediate Statistics Course
One course from the following options:
STAT/IDS 340 Statistics for Decision Making 3 Cr.
ECON 325 Econometrics 3 Cr.
Core
STAT 299 Statistics Colloquium I 1 Cr.
STAT 343 Time Series Analysis 3 Cr.
STAT 344 Stochastic Processes 3 Cr .
STAT 363 Introduction to SAS 3 Cr .
STAT 399 Statistics Colloquium II 1 Cr.
STAT 441 Probability 4 Cr.
STAT 442 Mathematical Statistics 3 Cr .
STAT 499 Statistics Colloquium III 1 Cr .

Elective
One course from the following options:
ACRS 325 Actuarial Modeling 3 Cr .

BIO/MATH 321 Mathematical Models of Infectious Diseases 3 Cr .
BUS 440 Data Mining 3 Cr .
CS 325 Simulation and Modeling 3 Cr .
DATA 433 Data Mining and Applications 3 Cr .

ECON 473 Applied Data Science 3 Cr .
GEO/MET 460 Data Analysis 3 Cr .

POLS 210 Research Methods in Political Science 3 Cr .
PSY 202 Research Methods in Psychology 3 Cr.
SOC 320 Research Methods in Sociology 3 Cr .
STAT $490 \quad$ Advanced Topics in Statistics 3 Cr.

Note: The chosen elective cannot be used to fulfill requirements of any other major or minor.
Additional Required Courses

| MATH 131 | Calculus I | 4 Cr. |
| :--- | :--- | :--- |
| MATH 132 | Calculus II | 4 Cr. |
| MATH 253 | Calculus III | 4 Cr. |
| One course from the |  |  |
| MATH 260 | Linear Systems and Matrices | 1 Cr. |
| MATH 264 | Linear Algebra | 3 Cr. |

Statistics majors may not pursue a minor in Applied Statistics. Statistics majors who are also pursuing either the Mathematics major or the Complementary Mathematics major may not use courses with a STAT prefix to fulfill any of the upper-level elective requirements for the Mathematics major or the Complementary Mathematics major. Statistics majors who are also pursuing a Mathematics minor may not use courses with a STAT prefix to fulfill any of the minor requirements.

## Placement and Special Credit

Before registration, each new student will be assigned a placement rank based on available student data and/or an online mathematics placement assessment. The Department of Mathematics and Statistics will recommend which course(s) each student should take. A student who is recommended for MATH 110 may not take any other Mathematics, Statistics, Computer Science, or some quantitatively based courses in other departments, without the consent of the chair of the appropriate department.

Qualified students may also take a Calculus Placement Exam. A student who is placed into MATH 132 will receive 4 credits for MATH 131 and 4 credits for MATH 132 by passing MATH 132 with a grade of $C$ or higher.

## Credit by Examination

Credit for MATH 131 and 132 may be earned through the College Level Examination Program subject examination in Introductory Calculus and through the AP calculus program.

## Approval of Schedules

All students taking a major or minor in the department must have their schedules approved by the chair of the department or his/her representative before registration each semester.

## Mathematics Courses

MATH 110 Quantitative Reasoning I 2 Cr .
(See paragraph on Placement.) 7 weeks. A first course to assist students in developing fundamental mathematical concepts and processes. Coursework is a combination of (1) in-class collaborative problem solving and algebraic skill building, and (2) on-line tutorials aiming for mastery of skill-based algebraic content within the realm of Intermediate Algebra. Completion of this course, or placement higher, is required for many quantitative courses across the University. This course may not be used to fulfill the General Education Requirement in the College of Arts and Sciences nor be counted toward a major or minor in mathematics. This course may not be taken by a student with credit for any other mathematics course.

MATH 111 Quantitative Reasoning II
2 Cr .
(See paragraph on Placement.) 7 weeks. A second course to assist students in developing fundamental mathematical concepts and processes. Coursework is a combination of (1) in-class collaborative problem solving and algebraic skill building with an emphasis on reasoning and communication and (2) on-line tutorials aiming for mastery of skill-based algebraic content within the realm of College Algebra. This course may not be used to fulfill the General Education Requirement in the College of Arts and Sciences nor be counted toward a major or minor in mathematics. Prerequisite: Grade of C- or higher in MATH 110, or placement higher than MATH 110 in the Math Placement process.

MATH $115 \quad$ Trigonometry and Functions 2 Cr .
(See paragraph on Placement.) 7 weeks. Topics will include trigonometry in the plane, trigonometric functions, simple vector geometry, functional concepts and notation, and an introduction to parametric equations and polar coordinates. Coursework is distributed both in-class and on-line. This course may not be used to fulfill the General Education Requirement in the College of Arts and Sciences nor be counted toward a major or minor in mathematics. Prerequisite: Grade of C- or higher in MATH 111, or placement higher than MATH 111 in the Math Placement process.
MATH 120
Mathematics in Modern Society
3 Cr .
(See paragraph on Placement.) A one semester course intended primarily for students majoring in the humanities. The relationship between mathematics and modern society is studied. Socially relevant topics will vary by instructor, but may include voting theory, game theory, or statistics \& data analysis. Emphasis placed on problem solving, reasoning, and mathematical writing. This course may be used to fulfill the Quantitative Analysis component of the General Education Requirements. Usually offered every spring semester. Prerequisite: Grade of C- or higher in MATH 110, or placement higher than MATH 110 in the Math Placement process.

Applied Calculus
(See paragraph on Placement.) A course for students with a good foundation in mathematics who are interested in mathematical models for the life, management, or social sciences. Topics include limits, continuity, derivatives and their applications, integrals and their applications, and selected topics in multivariate calculus. The course may be used to fulfill the Quantitative Analysis component of the General Education Requirements. Students with credit for MATH 131 may not receive credit for this course. Prerequisite: Grade of C- or higher in MATH 111, or placement higher than MATH 111 in the Math Placement process.

Finite Mathematics
(See paragraph on Placement.) A course for students with a good foundation in mathematics who are interested in mathematical models for the life, management, or social sciences. Topics include matrix algebra, linear programming, probability, counting methods, Markov chains, and game theory. May be used to fulfill the Quantitative Analysis component of the General Education Requirements. Prerequisite: A grade of C- or higher in MATH 111, or placement higher than MATH 111 in the Math Placement process.

Calculus I
$3+2,4 \mathrm{Cr}$.
(See paragraph on Placement.) A first course in the calculus sequence. Topics include limits, continuity, differentiation, application of the derivative, the Intermediate Value Theorem, definite integrals and the Fundamental Theorem of Calculus, with transcendental functions throughout. May be used to fulfill the Quantitative Analysis component of the General Education Requirements. This course is not open to students with credit for MATH 122. Prerequisite: Grade of C- or higher in MATH 115, or placement higher than MATH 115 in the Math Placement process.

Calculus II
$3+2,4 \mathrm{Cr}$.
A continuation of MATH 131. Topics include techniques of integration, applications of the definite integral, improper integrals, an introduction to differential equations, convergence of sequences and series, Taylor series, parametric equations, and polar coordinates. Prerequisite: Grade of C- or higher in MATH 131.

Mathematics Colloquium I
Students attend and act as moderators for sessions of MATH 499, and begin participating in co-curricular mathematical activities, culminating in MATH 399. S/U grade only.

Laboratory in Elementary Mathematics I
$0+1,0 \mathrm{Cr}$.
This course is designed to provide an opportunity for prospective elementary teachers to learn mathematical concepts in an active, materials-oriented context and to acquaint them with materials appropriate for use in the elementary school. Topics correspond to those in MATH 213. Enrollment is restricted to students majoring in elementary education. S/U grade only. Usually offered every fall semester. Prerequisite: concurrent registration in MATH 213.

Laboratory in Elementary Mathematics II
$0+1,1 \mathrm{Cr}$.
A continuation of MATH 211. Topics correspond to those in MATH 214. S/U grade only. Prerequisite: concurrent registration in MATH 214.
(See paragraph on Placement.) This course is restricted to students majoring in elementary education. Topics include elementary logic, sets, problem solving, numeration systems, the whole number system, the rational number system, and elementary number theory. Usually offered every fall semester. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

Mathematics for Elementary Teachers II
A continuation of MATH 213. Topics include two-and three-dimensional geometry, measurement, functions, graphing, probability, and statistics. Usually offered every spring semester. Prerequisite: MATH 213.

Discrete Mathematics
(Also offered as ECE 357.) An introduction to mathematical reasoning, algorithm analysis, and the concepts that provide a mathematical foundation for computer science. Topics include a review of sets, relations, functions and matrices, logic, proof techniques including mathematical induction, counting techniques, difference equations, applications, and elementary analysis of iterative and recursive algorithms. Usually offered every spring semester. Prerequisite: MATH 131 (may be taken concurrently).

| MATH 253 | Calculus III <br> A continuation of MATH 132. Topics include conic sections, vector algebra, space curves, calculus of functions of several variables, multiple integration, calculus of vector fields. Prerequisite: Grade of C- or higher in MATH 132. |
| :---: | :---: |
| MATH 260 | Linear Systems and Matrices <br> Students will study properties of, and solutions to, linear equations and systems of linear equations. Related topics include matrices, properties of matrices, matrix algebra, determinants, eigenvalues, real vectors in two and three dimensions, vector algebra (including dot and cross products), linear combinations, and linear independence. This class is not open to students with credit for MATH 264. Prerequisite: Grade of C- or higher in MATH 111, or placement higher than MATH 111 in the Math Placement process. |
| MATH 264 | Linear Algebra <br> A study of linear algebra and an introduction to mathematical reasoning. Topics include systems of linear equations, matrices, determinants, vectors in $n$-space, abstract vector spaces, and linear transformations. Usually offered every fall semester. Prerequisite: MATH 132 or MATH 220. |
| MATH 266 | Transitions in Mathematics <br> In this class, students prepare to become professional mathematicians. Major course components are 1) a study of common proof techniques using linear algebra and number theory as foundations, and 2) an introduction to current professional practices such as the use of mathematical typesetting software, the use of computational software, finding and reading mathematical literature, and a survey of current issues in mathematics. Usually offered every spring semester. Prerequisite: MATH 264, or MATH 132 and consent of the department chair. Recommended to be taken concurrently with MATH 299. |
| MATH 270 | Ordinary Differential Equations <br> Study of differential equations of a single variable, and their solutions (graphical, exact, and numerical), applications of ordinary differential equations, Laplace transforms, introduction to systems of linear differential equations, use of eigenvalues and eigenvectors in solving such systems. Prerequisites: Grade of C- or higher in MATH 132, and either MATH 260 or MATH 264. (The latter may be taken concurrently.) |
| MATH 285 | Practicum in Mathematics <br> Intensive professional experience and/ or technical training in a mathematics related field. A written report is required. S/U grade only. Prerequisite: MATH 264 and consent of the chair. |
| MATH 290 | Topics in Mathematics <br> Topics may include problem solving techniques, computer applications, or topics from finite mathematics. Only offered when there is sufficient demand. Prerequisite: consent of the instructor. |
| MATH 299 | Mathematics Colloquium II <br> Students are required to attend sessions of MATH 499, evaluate student presentations, and continue participating in co-curricular mathematical activities, culminating in MATH 399. S/U grade. Prerequisite: MATH 199. Recommended to be taken concurrently with MATH 266. |
| MATH 312 | History of Mathematics <br> Students will study the development of mathematics, usually through a survey of mathematics from earliest times to the present. Special topics may be chosen according to the interest of the class. Usually offered in the fall semester of even numbered years. |
| MATH 314 | Elements of Geometry <br> Logic, axiom systems, and models; consistency, independence, and completeness; consideration of the foundations of Euclidean and non-Euclidean geometries; topics from projective and transformational geometries. Usually offered in the fall semester of odd numbered years. Prerequisite: MATH 264 or MATH 266. |
| MATH 320/520 | Dynamical Systems <br> Theory and applications of mathematical models of dynamical systems (discrete and continuous). Topics include linear and non-linear equations, linear and non-linear systems of equations, bifurcation, chaos, and fractals. Usually offered in the fall semester of odd numbered years. Prerequisite: MATH 132. |

MATH 321/521 Mathematical Models of Infectious Diseases ..... 3 Cr .(Also offered as BIO 321.) An application of mathematical methods such as differential equations and elementarymatrix algebra to the study of infectious diseases, and analyze outbreaks and control methods (such asvaccinations). Usually offered online during the summer. Prerequisite: MATH 131 and one of STAT 140, STAT240, IDS 205, PSY 201, or CE 202.
MATH 322/522 Optimization ..... 3 Cr .Theory of, and computer algorithms for, the solution of mathematical programming problems and applications.Topics include the simplex method, cutting planes, branch and bound methods, and numerical methods forunconstrained optimization, game theory, and dynamic programming. Usually offered in the spring semester ofeven numbered years. Previous computer programming or spreadsheet experience is recommended but notrequired. Prerequisites: MATH 260 or MATH 264.
MATH 323/523 Game Theory ..... 3 Cr.An introduction to the fundamentals of game theory, including dominance, Nash equilibria, and evolutionarystable solutions. Students will explore various models of strategic games, and apply them to economics, biology,and other disciplines. Usually offered in the summer. Prerequisites: MATH 131 and one of STAT 140, STAT 240,IDS 205, CE 202, or PSY 201.
MATH 330/530 Partial Differential Equations ..... 3 Cr .Theory of, and solution techniques for, partial differential equations of first and second order, including the heatequation and wave equation in rectangular, cylindrical, and spherical coordinates. Tools include Fourier series,Bessel Functions, Legendre Polynomials, and transform techniques. Usually offered in the spring semester of oddnumbered years. Prerequisites: MATH 253 and MATH 270.
MATH 334/534 Complex Variables ..... 3 Cr.A study of mathematics in the complex plane, including analytic functions, derivatives, power and Laurent series,integrals, residues, and conformal mapping, with applications to partial differential equations. Usually offered inthe fall semester of even numbered years. Prerequisite: MATH 253.
Numerical Analysis3 Cr.Analysis and implementation numerical techniques such as polynomial interpolations, root finding, matrixsolutions to systems of equations, numerical solutions to differential equations (the finite different method), andnumerical integration, with an emphasis on theory and error analysis. Usually offered in the spring semester ofeven numbered years. Previous computer programming or spreadsheet experience is recommended but notrequired. Prerequisite: MATH 260 or MATH 264.
MATH 371/571 Experimental Mathematics ..... 3 Cr .A study of the role of computation and experimentation in mathematical proof. Students will learn to write codein a mathematical programming language (e.g. Maple), and then apply programming skills to a variety ofmathematical problems. Topics include enumeration, continued fractions, high precision computing, andnumerical integration, among others. Students will also study famous proofs that integrate computation innontrivial ways, and the current state of automated theorem proving/automated proof-checking software.Usually offered in the spring semester of odd numbered years. Prerequisites: MATH 220, MATH 266, or ECE 357.
MATH 373$2+2,3 \mathrm{Cr}$
(Also offered as CS 373 and DATA 373.) A survey of computational applications of linear algebra for solving science and engineering problems. Topics include linear systems in both equation and matrix form, row operations, inverses and determinants, eigenvalues, Gaussian elimination, matrix decomposition (including singular value and QR decompositions), sparse vs. dense matrices, and approximation. Topics are explored through applications to large data sets, with programming in both Python and MATLAB environments. Other advanced topics related to data mining may be covered. Prerequisites: CS 157 or DATA 151 and MATH 260 or MATH 264.

MATH 381 Cooperative Education in Mathematics 1-2 Cr.
The application of mathematical concepts in a professional setting. Grade based on employer's evaluation and student's written and oral reports. May be repeated for additional credit. S/U grade only. Prerequisite: MATH 266 or approval of the chair of the department.

| MATH 399 | Mathematics Colloquium III <br> Students are required to attend sessions of MATH 499, and participate in activities related to mathematics that take place outside of the classroom. Examples include attending a mathematics conference, participating in service learning opportunities, or taking the national Putnam exam. Potential activities are assigned points, and students must attain a certain minimum number of points before the completion of this course to receive credit. Prerequisite: MATH 299 and at least junior standing. |
| :---: | :---: |
| MATH 421 | Combinatorics I <br> Theory of combinatorics, including elementary counting techniques, the inclusion-exclusion principle, Ramsey theory, and an introduction to graph theory. Additional topics are introduced according to the interests of the students. Usually offered every third semester. Prerequisite: MATH 266. |
| MATH 422 | Combinatorics II <br> A continuation of MATH 421. Topics include generating functions and recurrence relations, Polya's theorem, matchings and coverings, and other topics based on the interests of the students. Usually offered every third semester. Prerequisite: MATH 421 or consent of the instructor. |
| MATH 451 | Analysis I <br> Properties of real numbers, theory of continuity, differentiation and integration of real valued functions of a real variable, sequences, series, and uniform convergence. Usually offered every third semester. Prerequisites: MATH 132 and MATH 266. |
| MATH 452 | Analysis II <br> Theory of continuity and differentiation of real and vector-valued multi-variable functions; multiple integration and the Jacobian; implicit and inverse function theorems; topology of real $n$-space. Usually offered every third semester. Prerequisites: MATH 253 and MATH 451. |
| MATH 453 | Topology <br> Introduces students to topological spaces, open and closed sets, continuous functions, limit points, and homeomorphisms. Topics also include properties of spaces, such as connectedness and path-connectedness. Additional topics could consist of applications of topology, such as knot theory and 2-D manifolds. Offered every third semester. Prerequisite: MATH 266. |
| MATH 461 | Abstract Algebra I <br> A course in the theory of mathematical structures, i.e. groups, rings, and fields, along with substructures, quotient structures, and homomorphisms. Usually offered every third semester. Prerequisite: MATH 266. |
| MATH 462 | Abstract Algebra II <br> A continuation of MATH 461. Topics may include a more detailed study of rings, polynomial rings, field extensions, field automorphisms, an introduction to Galois theory, further work in group theory, an introduction to additional structures. Usually offered every third semester. Prerequisite: MATH 461. |
| MATH 490/590 | Advanced Topics in Mathematics <br> An advanced course for mathematics majors, topics will vary according to faculty and student interest. Only offered when there is sufficient demand. Prerequisites will depend on the content. |
| MATH 495 | Independent Study in Mathematics <br> Students study advanced topics in mathematics under the supervision of a faculty member. Written work is required. Prerequisite: consent of the chair of the department. |
| MATH 496 | Research in Mathematics <br> Students undertake a research problem in mathematics under the direction of a faculty member. Written and oral reports are required. S/U grade only. Prerequisite: Consent of the instructor or chair of the department. |
| MATH 497 | Honors Work in Mathematics <br> See Honors Work, page 63. |
| MATH 498 | Honors Candidacy in Mathematics <br> See Honors Work, page 63. |

## MATH 499

Mathematics Colloquium IV
Students explore, write about, and give presentations about a topic or topics chosen according to the interests of faculty and students. Guest speakers may be arranged in accordance with the topic or topics. Students design, implement, and run a regularly-scheduled departmental colloquium, to which all faculty and students are invited. Prerequisites: MATH 266 and MATH 399.

## Statistics Courses

| STAT 140 | General Statistics 3 Cr . |
| :---: | :---: |
|  | A noncalculus-based introduction to the major concepts and tools for collecting, organizing, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: planning a study; exploring data; anticipating patterns; and statistical inference. This course may be used to fulfill the Quantitative Analysis component of the General Education Requirements. Not open to students with credit for STAT 240, IDS 205, PSY 201, or CE 202. Prerequisite: MATH 110, or placement higher than MATH 110 in the Math Placement process. |
| STAT 240 | Statistical Analysis 3 Cr . |
|  | An introduction to probability and statistics for students who have completed a semester of calculus. Topics include probability, empirical and theoretical frequency distributions, sampling, correlation and regression, testing hypotheses, and estimation of parameters, with an emphasis on illustrations and applications of these techniques. Students with credit for STAT 140, IDS 205, PSY 201, or CE 202 must obtain permission from the department chair. Prerequisites: MATH 122 or Math 131. |
| STAT 299 | Statistics Colloquium I 1 Cr . |
|  | Students read current newspaper or journal articles involving statistics and complete written analyses and/or oral presentations. Students evaluate senior presentations given by students in STAT 499. Guest speakers may be arranged to present on a variety of topics in statistics. Meets jointly with STAT 399 and STAT 499. Prerequisite: one of STAT 140, STAT 240, PSY 201, IDS 205, or CE 202. |

STAT 340/540 Statistics for Decision Making 3 Cr.
(Also offered as IDS 340.) A study of statistical concepts and methods to facilitate decision making. Content includes analysis of variance, simple and multiple regression, correlation, time-series analysis, and nonparametric methods. This course is not open to students who have completed IDS 340. Prerequisite: one of STAT 140, STAT 240, IDS 205, PSY 201, or CE 202.

This course studies statistical modeling and forecasting of time series, which are observations made sequentially through time. Applications of time series discussed are selected from finance, economics, health sciences, meteorology, and many other fields. Students will participate in periodic computer lab sessions with the software SAS. Usually offered every spring semester. Prerequisite: one of STAT 340, IDS 340, or ECON 325.

## STAT 344/544 Stochastic Processes <br> 3 Cr.

This course focuses on the modeling and analysis of stochastic processes arising from a wide range of applications. Topics include discrete-time Markov chains, Poisson processes, continuous-time Markov chains, queueing theory, and decision theory. Usually offered in the fall semester of odd numbered years. Prerequisites: a linear algebra course (MATH 260 or MATH 264) and a statistics course (one of STAT 140, STAT 240, IDS 205, PSY 201, or CE 202).

## STAT 363/563 Introduction to SAS

An introductory course to the statistical analysis software SAS. Topics include basic SAS programming, creating SAS data sets from external files, creating and managing variables, reading raw data in fixed fields, reading free-format data, reading date and time values, producing descriptive statistics, SAS functions, SAS plots, one-sample tests, twosample tests, and linear regression. Prerequisite: one of STAT 340, IDS 340, or ECON 325.

The application of statistical concepts in a professional setting. Grade based on employer's evaluation and student's written and oral reports. S/U grade only. May be repeated for additional credit. Prerequisite: Statistics major and approval of the department chair.

| STAT 386 | Internship in Statistics <br> Opportunities for students to have direct, supervised experience in public agencies or private industry, such as scientific, technical, or financial firms. S/U grade. Prerequisites: Statistics major and approval of the department chair. |
| :---: | :---: |
| STAT 399 | Statistics Colloquium II <br> Students read current newspaper or journal articles involving statistics and complete written analyses and/or oral presentations. Students will propose and design a statistical project to be completed in STAT 499. Guest speakers may be arranged to present on a variety of topics in statistics. Meets jointly with STAT 299 and STAT 499. Prerequisite: STAT 299. |
| STAT 441/541 | Probability <br> A course in probability with some topics applicable to statistics. Topics include probability spaces, random variables, classical discrete and continuous probability distributions, multivariate probability distributions (with an introduction to multivariable calculus), and joint and conditional distributions. Usually offered every third semester. Prerequisite: MATH 132. |
| STAT 442/542 | Mathematical Statistics <br> A continuation of STAT 441. Topics include Central Limit Theorem, covariance, moments, estimation, tests of hypotheses, and sampling theory. Usually offered every third semester. Prerequisite: STAT 441. |
| STAT 490/590 | Advanced Topics in Statistics <br> An intensive study of selected topics, methods, techniques, and problems in applied statistics. Only offered when there is sufficient demand. Prerequisites will depend on the content. |
| STAT 495 | Independent Study in Statistics <br> Students study advanced topics in statistics under the supervision of a faculty member. Written work is required. Prerequisite: consent of the chair of the department. |
| STAT 496 | Research in Statistics <br> Students undertake a research problem in statistics under the direction of a faculty member. Written and oral reports are required. $\mathrm{S} / \mathrm{U}$ grade only. Prerequisite: Consent of the instructor or chair of the department. |
| STAT 497 | Honors Work in Statistics <br> See Honors Work, page 63. |
| STAT 498 | Honors Candidacy in Statistics <br> See Honors Work, page 63. |
| STAT 499 | Statistics Colloquium III <br> Students read current newspaper or journal articles involving statistics and complete written analyses and/or oral presentations. Students will each individually complete a major project involving statistics, producing a written paper and oral presentation. Guest speakers may be arranged to present on a variety of topics in statistics. Meets jointly with STAT 299 and STAT 399. Prerequisite: STAT 399. |

## Music



Professors Brugh, C. Cock, Doebler, Friesen-Carper; Associate Professors Bognar (chair), Maugans; Assistant Professors Grodrian, Uhde; Clinical Adjunct Assistant Professors J.C. Brown; Lecturers M. Cock, Lee.

The Department of Music offers three degree programs: Bachelor of Arts, Bachelor of Music, and Bachelor of Music Education. The Bachelor of Arts may be pursued as a traditional liberal arts music major with an emphasis in performance, church music or music industry. Study of music may also be combined with the Diaconal Program (see page 62). The Bachelor of Music may be earned through concentrated professional study in one of three tracks: performance, church music, or composition. The Bachelor of Music Education carries full teaching certification in a combination of vocal, instrumental, and general music. Valparaiso University is an accredited institutional member of the National Association of Schools of Music.

Graduates from the Department of Music pursue careers of varied kinds: teaching music in elementary and secondary schools, universities, and in private studios; professional music leadership in churches; performance; and positions in arts related businesses (arts management, recording, publishing, music retailing, music technology, and entertainment). The Music curriculum is also especially well designed to prepare students for graduate study in music leading to professions in higher education and performance. Mastery of performance, verbal, and critical thinking skills are expected in most music-related professions. Some fields, such as music education, church music, and music business, require hands-on training through internship experiences. Ability to improvise, compose, arrange, and conduct increases the musician's chances for success. The Music curriculum is designed to meet these expectations.

## Admission

A performance audition and theory placement is required for entry into the music major or minor. Music majors must also meet all admissions requirements set by the University and by the College of Arts and Sciences.

## Departmental Requirements

Majors and minors must meet all requirements set for them by this department, as outlined in the Department Handbook for Music Students which is located online (http://www.valpo.edu/music) and which is available on request from the Department of Music Office. Regulations concerning student performance, concert attendance, ensemble participation, music colloquium, and the Keyboard Proficiency Tests are included in the handbook.

## Special Co-Curricular Programming

Visiting performers, scholars, and clinicians supplement the regular curricular instruction through frequent recitals, lectures, workshops, and seminars presented by the department. Annual events of long-standing include the Jazz Festival, the Church Music components of the Liturgical Institute, and performances of the Bach Institute. A wide array of faculty and guest performances, combined with regular presentation of student soloists, chamber musicians, and ensembles are programmed annually. The concert calendar is deliberately designed to support student learning in the major; at the same time it offers rich cultural opportunities to other students and all members of the University community, as well as audiences in Northwest Indiana.

## Bachelor of Arts - Music Major (Minimum 40 Cr.)

The Bachelor of Arts in music, the traditional liberal arts music track, allows time for a second major or a minor, if carefully planned; an international or urban semester is also possible. Candidates for the Bachelor of Arts degree with a major in music must meet all General Education Requirements as well as departmental requirements.

| Music Core |  | 31 Cr. |
| :---: | :---: | :---: |
| MUS 109 | Musicianship I | 2+1, 2 Cr . |
| MUS 110 | Musicianship II | 2+1, 2 Cr . |
| MUS 163 | Music Theory I | 3 Cr . |
| MUS 164 | Music Theory II | 3 Cr . |
| MUS 201 | Development of Western Music | 2 Cr . |
| MUS 263 | Music Theory III | 3 Cr . |
| MUS 318 | Music of the Baroque, Classical and Early Romantic Eras | 3 Cr . |
| MUS 319 | Music of the Late Romantic and Modern Eras | 3 Cr . |
| MUS 499 | Music Colloquium (six semesters) | 0 Cr . |
| Six credits of princ | l performing medium (complete MUAP 203) | 6 Cr . |
| Four credits of ens | ble participation | 4 Cr . |
| One of the following options: |  |  |
| Performance-Musical Arts Option |  |  |
| For music majors interested in emphasizing music performance, theory, and history |  |  |
| MUS 209 | Musicianship III | 2+1, 2 Cr . |
| One course from the following options: |  |  |
| MUS 264 | Music Theory IV | 3 Cr . |
| MUS 463 | Post-Tonal Music Theory | 3 Cr . |
| One credit from the following options: |  |  |
| MUS 404 | Recital | 1-2 Cr. |
| MUS 495 | Independent Study in Music | 1-3 Cr. |
| At least 3 additional credits from the following options: |  |  |
| MUS 210 | Musicianship IV | 2+1, 2 Cr . |
| MUS 213 | Basic Conducting | 2 Cr . |
| MUS 285 | Introduction to the Music Industry | 3 Cr . |
| Any $\mathbf{3 0 0}$ or 400-level music course (excluding studio lessons) |  |  |
| Church Music Option |  |  |
| For music majors with a particular interest in church music |  |  |
| MUS 213 | Basic Conducting | 2 Cr. |
| MUS 313 | Intermediate Conducting | 2 Cr . |
| MUS 473 | Church Music and Liturgical Theology | 3 Cr . |
| MUS 486 | Internship | 2 Cr . |
| Level 203 in the primary performance medium |  |  |
| Level 103 in piano or organ (if the primary performance medium is not piano or organ) |  |  |
| Music Industry Option |  |  |
| MUS 285 | Introduction to the Music Industry | 3 Cr . |
| MUS 405 | Arts and Entertainment Administration | 3 Cr . |

MUS $486 \quad$ Internship
One minor from the following options (recommended):
Business Administration
Fundamentals of Business
Studio Art
General Communication
Digital Media

## Bachelor of Music Education

The General Education and Professional Education Requirements for this degree are given on page 54.

| Music Core |  | 39 Cr . |
| :---: | :---: | :---: |
| MUS 109 | Musicianship I | 2+1, 2 Cr . |
| MUS 110 | Musicianship II | 2+1, 2 Cr . |
| MUS 209 | Musicianship III | 2+1, 2 Cr . |
| MUS 210 | Musicianship IV | 2+1, 2 Cr . |
| MUS 163 | Music Theory I | 3 Cr . |
| MUS 164 | Music Theory II | 3 Cr . |
| MUS 263 | Music Theory III | 3 Cr . |
| MUS 264 | Music Theory IV | 3 Cr . |
| MUS 201 | Development of Western Music | 2 Cr . |
| MUS 318 | Music of the Baroque, Classical and Early Romantic Eras | 3 Cr . |
| MUS 319 | Music of the Late Romantic and Modern Eras | 3 Cr . |
| MUS 213 | Basic Conducting | 2 Cr . |
| MUS 313 | Intermediate Conducting | 2 Cr . |
| Six credits from the following options: |  |  |
| MUEN 350 | Choirs | 1 Cr . |
| MUEN 352 | Bands | 1 Cr . |
| MUEN 354 | Orchestra | 1 Cr . |
| One credit from the following options: |  |  |
| MUEN 357 | Small Ensemble Music | 0.5 Cr. |
| MUEN 358 | Chamber Music | 0.5 Cr . |
| MUS 499 | Music Colloquium (seven semesters) | 0 Cr . |
| Music Education Co |  | 26 Cr . |
| Principal Instru |  | 8 Cr . |
| Secondary Instr |  | 5 Cr . |
| MUS 230 | Wind/Percussion Methods | 3 Cr . |
| MUS 231 | Stringed Instructional Methods | 0+2, 1 Cr . |
| MUS 239 | Voice Instructional Methods | 0+2, 1 Cr . |
| MUS 312 | Scoring and Arranging | 2 Cr . |
| MUS 389 | School Music I | 3 Cr . |
| MUS 489 | School Music II | 3 Cr . |
| Additional Required Courses |  |  |
| PSY 110 | General Psychology | 3 Cr . |
| COMM 243 | Public Communication | 3 Cr . |

## Bachelor of Music

For the General Education Requirements for this degree, see page 52.

| Music Core |  | 46 Cr. |
| :---: | :--- | ---: |
| MUS 109 | Musicianship I | $2+1,2 \mathrm{Cr}$. |
| MUS 110 | Musicianship II | $2+1,2 \mathrm{Cr}$. |
| MUS 209 | Musicianship III | $2+1,2 \mathrm{Cr}$. |

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| MUS 210 | Musicianship IV | $2+1,2 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| MUS 163 | Music Theory I | 3 Cr. |
| MUS 164 | Music Theory II | 3 Cr. |
| MUS 263 | Music Theory III | 3 Cr. |
| MUS 264 | Music Theory IV | 3 Cr. |
| MUS 201 | Development of Western Music | 2 Cr. |
| MUS 318 | Music of the Baroque, Classical and Early Romantic Eras | 3 Cr. |
| MUS 319 | Music of the Late Romantic and Modern Eras | 3 Cr. |
| MUS 401 | Early Music Seminar | 2 Cr. |
| MUS 213 | Basic Conducting | 2 Cr. |
| MUS 463 | Post-Tonal Music Theory | 3 Cr. |
| MUS 464 | Advanced Musical Analysis | 3 Cr. |
| Music Ensemble | 8 Cr. |  |
| MUS 499 | Music Colloquium (eight semesters) | 0 Cr. |

## Other Requirements

| Church Music or Composition |  |  |  |
| :--- | :---: | :---: | :---: |
|  | Organ | Voice | Comp |
| MUS 312 | -- | -- | 2 |
| MUS 313 | 2 | 2 | 2 |
| MUS 404 | $1+2$ | $1+2$ | 1 |
| MUS 415 | 2 | 2 | -- |
| MUS 454 | 1 | 1 | -- |
| MUS 473 | 3 | - | -- |
| Composition | -- | -- | 12 |
| Performance Study |  |  |  |
| Piano or Harpsichord | -- | -- | 12 |
| Organ | 4 | -- | -- |
| Voice | $20^{9}$ | 8 | -- |
| Total Credits | 4 | $20^{9}$ | 29 |
| Elective Credits | 39 | 39 | $10-12$ |
| Total Required | $6-8$ | $6-8$ | 128 |


| Performance |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Organ | Piano | Voice | Instrument |
| MUEN 358 | -- | - | -- | 2 |
| MUS 313 | -- | - | 2 | 2 |
| MUS 220-223 | -- | - | - | - |
| MUS 404 | $1+2$ | $1+2$ | $1+2$ | $1+2$ |
| MUS 423 | 3 | 3 | -- | 3 |
| MUS 454 | -- | - | 1 | -- |
| Piano | 4 | -- | 4 | -- |
| Principal Instrument | $20^{9}$ | $20^{9}$ | $20^{10}$ | $20^{9}$ |
| Total | 30 | 28 | 33 | 30 |
| Elective Credits | $9-11$ | $11-13$ | $6-8$ | $9-11$ |
| Total Required | $\mathbf{1 2 8}$ | $\mathbf{1 2 8}$ | $\mathbf{1 2 8}$ | $\mathbf{1 2 8}$ |

[^6]
## Music Minor (Minimum 18 Cr.)

| MUS 109 | Musicianship I | 2+1, 2 Cr . |
| :---: | :---: | :---: |
| MUS 163 | Music Theory I | 3 Cr . |
| MUS 164 | Music Theory II | 3 Cr . |
| MUS 201 | Development of Western Music | 2 Cr . |
| Four credits of studio instruction (completion of MUAP 103) |  | 4 Cr . |
| Four credits of ensemble music instruction from the following options: |  | 4 Cr . |
| MUEN 350 | Choirs |  |
| MUEN 352 | Bands |  |
| MUEN 354 | Orchestra |  |

Note: Minors must meet all additional requirements set for them by this department as outlined in the Department Handbook for Music Students (see page 217).

## Theory, History, and Methods Courses

A study of the basic forms and styles of musical art in Western civilization and in non-Western cultures. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

An overview of the stylistic trends in Western art music from the Middle Ages to the contemporary era. Prerequisite: MUS 163.

An intermediate course in ear-training, sight-singing, and guided listening. Prerequisite: Grade of C- or higher in MUS 110 and MUS 164.

Musicianship IV
An advanced course in ear-training, sight-singing, and guided listening. Prerequisite: Grade of C- or higher in MUS 209 and MUS 263.


An introduction to conducting including a study of score reading, beat patterns, acoustics, and interpretive principles. Prerequisite: MUS 164 or consent of the instructor.

English Diction for Singers 1 Cr.
Using the International Phonetic Alphabet as a guide, students acquire the skills to read, hear, transcribe, and sing English lyric texts with proper clarity, inflection, and understanding.

Italian Diction for Singers 1 Cr .
Using the International Phonetic Alphabet as a guide, students acquire the skills to read, hear, transcribe, and sing Italian lyric texts with proper clarity, inflection, and understanding.

German Diction for Singers
1 Cr .
Using the International Phonetic Alphabet as a guide, students acquire the skills to read, hear, transcribe, and sing German lyric texts with proper clarity, inflection, and understanding. Prerequisite: MUS 220 or MUS 221.

French Diction for Singers
1 Cr .
Using the International Phonetic Alphabet as a guide, students acquire the skills to read, hear, transcribe, and sing French lyric texts with proper clarity, inflection, and understanding. Prerequisite: MUS 220 or MUS 221.

Wind/Percussion Methods
3 Cr .
Brass, woodwind, and percussion instruments are studied for the purpose of giving the student a fundamental playing and teaching competence in these instruments.

Stringed Instructional Methods 0+2, 1 Cr .
Violin, viola, violoncello, and contrabass are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

Guitar Instructional Methods 0+2, 1 Cr .
Guitar is studied for the purpose of giving the student the basic playing skills necessary for the use of the guitar in classroom music teaching.

Voice Instructional Methods
$0+2,1 \mathrm{Cr}$.
This course is designed to give the student a fundamental technical and teaching knowledge of the voice as an instrument.

Music Theory III 3 Cr.
A continuation of MUS 164 with further exploration of chromatic harmony and musical forms. Topics include chromatic harmonies/borrowed chords, German Lieder, and ternary, rondo, and sonata forms. Emphasis is on analysis, writing about music, and application of analysis to performance. Prerequisite: Grade of C- or higher in MUS 164.

Music Theory IV
3 Cr.
An introduction to eighteenth-century contrapuntal forms (canon, invention, and fugue) and study of twentiethcentury post-tonal music. Contrapuntal, melodic, and harmonic techniques will be derived from study of compositions in their entirety. Emphasis is on analysis, writing about music, and application of analysis to performance. Prerequisite: Grade of C- or higher in MUS 263.

Introduction to the Music Industry
3 Cr .
An overview of the history, trends, and scope of the music industry as it relates to career opportunities, including retailing, publishing, manufacturing, performing and recording, and managing musical enterprises.

Scoring and Arranging
2 Cr.
The techniques of scoring for orchestra and band and of arranging music for choral performance. Through guided exercises and assigned readings, students learn how to prepare music written in one medium for use in another. Knowledge of vocal and instrumental capabilities is learned; skills in combining voices and instruments in various ensembles are practiced. Prerequisite: MUS 164.

Intermediate Conducting
A continuation of MUS 213. Includes rehearsal techniques, specific choral and instrumental conducting problems, and ensemble conducting experience. Prerequisite: MUS 213.

| MUS 318 | Music of the Baroque, Classical, and Early Romantic Eras <br> The development of musical thought and literature from 1700 to 1880. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: Grade of C- or higher in MUS 201. |
| :---: | :---: |
| MUS 319 | Music of the Late Romantic and Modern Eras <br> A study of music and musical thought from 1880 to the present. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: Grade of C- or higher in MUS 318. |
| MUS 381 | Cooperative Education in Music <br> Professional work experience with a cooperating employer. Written report required. Prerequisite: chair's approval of written proposal submitted to the department office at least 6 weeks prior to start of the semester. |
| MUS 389 | School Music I <br> A course designed to deal with materials, procedures, organization, administration, and musical growth and development of children in elementary and junior high/middle schools. Prerequisite: MUS 164. |
| MUS 390 | Topics in Music <br> Specific topics based on interests of students and faculty. Topics may vary from one semester to another. May be repeated for credit if topics are different. Some sections of this course may be used to fulfill the Writing Intensive General Education Requirement. Prerequisite: sophomore standing. |
| MUS 401 | Early Music Seminar <br> A history of Western music from antiquity to the early Baroque era; emphasis is placed on historical research and the study of notation and performance practice. Prerequisite: MUS 318. |
| MUS 404 | Recital <br> Preparation and performance of a program of music as specified in the Handbook for Music Students. |
| MUS 405 | Arts and Entertainment Administration <br> A general survey of the field covering all basic elements of arts and entertainment administration, including a brief overview of investigational methodologies and the functions of management within arts organizations. Prerequisite: Senior standing. |
| MUS 413 | Advanced Conducting, Choral/Instrumental <br> A study of instrumental and choral scores, conducting techniques, and materials. Prerequisite: MUS 313 or the equivalent. |
| MUS 415 | Liturgical Organ Playing <br> A practical course in playing hymns and chants, accompanying, realization of figured bass, score reading, and improvising in small forms. The historic and current roles of the organ in the liturgy are discussed. Prerequisites: three years of organ study, completion of level 203 in a keyboard studio area, and MUS 164, or permission of the instructor. Offered in alternate years. |
| MUS 423 | Pro-Seminar in the Pedagogy of Music <br> A consideration of the problems of teaching basic musicianship at all levels. Special attention is given to the adaptation of basic principles to the media of most interest to the members of the pro-seminar. Prerequisite: music major or music minor with at least junior standing or consent of the chair. |
| MUS 454 | Teaching of Performance Music <br> A survey of pedagogical materials and methodology of the student's performance area. Students will be required to observe lessons and do practice teaching during the semester. Must be taken concurrently with MUAP 453. |
| MUS 463 | Post-Tonal Music Theory <br> A study of the techniques and procedures of impressionism, neoclassicism, non-serial atonality, serialism, minimalism, indeterminacy, and neo-romanticism. Prerequisite: MUS 263. |
| MUS 464 | Advanced Musical Analysis <br> An introduction to a variety of advanced analytical techniques, including Schenkerian analysis. Prerequisite: MUS 264. |

## MUS 473

Church Music and Liturgical Theology
3 Cr .
(Also offered as THEO 456/556.) An intensive academic study of the history and practices of music and liturgy in Christian churches with an emphasis on the Lutheran heritage. Study includes both primary liturgical theology (participation in a variety of liturgical expressions), and secondary liturgical theory (reflection on liturgical forms and structure). Topics include theologies and practices of music, history of hymnody, and music in worship. Open to upper division music majors as well as upper division and graduate theology majors and minors; non-majors may be admitted by permission of the instructor. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. May not be used to fulfill the upper level Theology component of the General Education Requirements.

Internship
1-3 Cr.
Direct, supervised experience in the music industry, church music, or other sectors in the field of music. Prerequisite: approval of the chair of the department.

School Music II
3 Cr .
A study of music materials, procedures, organization, administration, and musical growth and development of students in junior high/ middle and high schools. Includes introduction of philosophical foundations, principles, and literature of the music education profession. Prerequisite: MUS 389.

Independent Study in Music
1-3 Cr.
A course of study arranged by the student with the consent of and under the supervision of a faculty advisor. The study results in a written essay on a topic approved by the advisor. Prerequisites: MUS 264 or MUS 381 and approval of the chair of the department.

MUS 497 Honors Work in Music 3 Cr.
See Honors Work, page 63.
MUS 498 Honors Candidacy in Music
3 Cr .
See Honors Work, page 63.
MUS 499
Music Colloquium
0 Cr .
All music majors will register for this course each semester in residence as outlined in the Handbook for Music Students. S/U grade.

## Performance

Note: Non-music majors who are candidates for degrees in the College of Arts and Sciences are restricted to a maximum of 16 credit hours in performance and/or ensemble which may be applied toward degree requirements. See page 58 for more information.

## A. Studio Instruction

See page 418 for appropriate fees.
A program of studio instruction is offered to students of Valparaiso University in piano, organ, harpsichord, orchestral and band instruments, voice, guitar, and composition. The choice and use of materials are determined by the instructor in each area following guidelines which appear in the Department of Music Handbook for Music Students. A limited number of studio spaces are available for non-majors. All non-major studio enrollments are for 1 credit hour. Bachelor of Music Education and Bachelor of Music majors may register for 2 credit hours in their principal performance medium. Only Bachelor of Music majors may register for 3 credit hours in their principal performance medium. Studio instruction for music majors is supplemented with a required performance colloquium which meets for one 50 -minute period per week (MUS $499,0 \mathrm{cr}$.); non-majors enrolled in studio instruction are welcome to participate in the colloquium and are urged to do so.

Music majors are accepted into the music program following an audition and are placed at an appropriate level as specified by the guidelines of their chosen degree program. Other students will be placed at an appropriate level through consultation with the chair of the department and the studio faculty. Students with no, or minimal, prior study should register for MUAP 003.

Studio instruction is available in:

| Voice | Flute |
| :--- | :--- |
| Piano and Jazz Piano | Oboe |
| Harp | Clarinet |
| Harpsichord | Bassoon |
| Organ | Saxophone |
| Organ Improvisation | French Horn |
| Violin | Trumpet |
| Viola | Trombone |
| Violoncello | Euphonium |
| Contrabass | Tuba |
| Classical Guitar | Percussion |
| Viola da gamba | Alexander Technique |
| Composition |  |

Composition
The Department of Music has six articulated levels of performance study, each of which is tied to technical and repertoire proficiencies. Advancement through studio levels is based on performance at juries each semester and through completion of repertoire and technical requirements established for each level. The repertoire for each performance medium stresses variety in styles and periods and is selected from the standard repertoire.

Titles of the individual course sections correspond to the area of study (e.g. MUAP 003 Bassoon).

## MUAP 003

1 Cr .
Beginning studio instruction. May be repeated for credit. Prerequisite: consent of the department chair.
MUAP 103
Intermediate studio instruction. Standard level of entry for students who have studied on their instrument throughout high school; music minors are required to complete the repertoire requirements of this level. May be repeated for credit. Prerequisite: placement through departmental audition or successful completion of the jury requirements for MUAP 003, and consent of the department chair.

## MUAP 203

Late intermediate studio instruction. Completion of this level is required for the Bachelor of Arts in Music. This is the expected entry level for incoming BM Performance and Church Music majors. May be repeated for credit. Prerequisite: placement through departmental audition or successful completion of the jury requirements for MUAP 103, and consent of the department chair.

1-3 Cr.
Early advanced studio instruction. Completion of this level is required for the Bachelor of Music Education. May be repeated for credit. Prerequisite: successful completion of the jury requirements for MUAP 203 and consent of the department chair.

## MUAP 403

Advanced studio instruction. May be repeated for credit. Prerequisite: successful completion of the jury requirements for MUAP 303 and consent of the department chair.

## MUAP 453

1-3 Cr.
Late advanced studio instruction. Completion of this level is required for BM Performance and Church Music majors. May be repeated for credit. Prerequisite: successful completion of the jury requirements for MUAP 403 and consent of the department chair.

## B. Ensemble Music Instruction

Instruction in one of the major ensembles for a period of one semester gives one credit hour. Instruction in one of the minor ensembles gives 0.5 credit hour. The following are considered major ensembles: Valparaiso University Chorale, Kantorei, Concert Band, Jazz Ensemble, Symphony Orchestra, Luce Band, Men's Ensemble, and Women's Choir. All other ensembles listed here are considered minor ensembles. All ensemble courses are available for graduate credit at the 500 level. Enrollment at the 500 level is limited to students who have specialized training and background to participate in the ensemble in some capacity (such as assistant conductor, section leader, or project director) to be determined by the instructor of the ensemble and with the approval of the chair of the department.

| MUEN 350/550 | Choirs <br> Valparaiso University Chorale, Kantorei, Men's Ensemble, and Women's Choir: admission by audition only. |
| :--- | :--- |
| MUEN 352/552 | Bands <br> Concert Band, Luce Band, Jazz Ensemble: admission by audition only. Also Community/University Band: audition <br> not required. |
| MUEN 354/554 | Orchestra <br> University Symphony Orchestra: admission by audition only. |
| MUEN 356/556 | Music/Theatre Workshop <br> Admission by audition only. |
| MUEN 357/557 | Small Ensemble Music <br> Small specialized ensembles to study and perform an array of repertoires, including Horn Ensemble, Guitar |
|  | Ensemble, and Jazz Combo. Open to students at a variety of skill levels. Some sections require audition or prior <br> consultation with the instructor. <br> MUEN 358/558 <br> Chamber Music <br> Specialized ensembles, one to a part, for study and performance of standard chamber music repertoire (typically <br> instrumental duos, trios, quartets, etc.) Admission and placement in sections by department screening only. |

## Philosophy

Learn more about the Department of Philosophy at Valpo online.

## Associate Professors Geiman, Preston (chair), Assistant Professor Woodward.

Philosophy is the oldest academic discipline, and the one broadest in scope and application. Courses in philosophy examine the big, foundational questions that have animated great thinkers in both Western and non-Western civilizations, such as the following: What is the right way to live? How should society be structured? What is the relationship between human beings and the rest of the natural world? What is ultimately real, and what is its nature? How is knowledge about these, as well as more mundane matters, to be obtained?

The study of philosophy tends to develop and sharpen students' analytical and critical thinking skills, not only in connection with topics traditionally deemed 'philosophical,' but in all areas. That's why philosophy majors tend to outperform all other humanities majors, and in many cases even STEM majors, on tests such as the GRE, LSAT, and GMAT. Philosophical training has proven to be a "secret weapon" for leaders in many other fields including business, law, government, the military, and ministry. Thus, philosophical coursework naturally accompanies and enhances study in virtually any other field. Philosophy can also help Christians and members of other faiths think critically about various issues relevant to their religious commitments.

VU philosophy majors have gone on to top law schools and graduate programs in business, medicine, linguistics, and, of course, philosophy. But even for those students who do not plan to pursue graduate study, a degree in philosophy is a prudent choice. Because of their exceptional critical thinking and communication skills, the employment rate of recent philosophy graduates exceeds those of any other humanities majors, and is comparable with that of graduates in business management, computer science, education, and chemistry.


## Philosophy Minor (Minimum 18 Cr.)

| PHIL 145 | Elementary Logical and Critical Thinking | 3 Cr |
| :--- | :--- | :--- |
| PHIL 275 | Ancient and Medieval Philosophy | 3 Cr |
| PHIL 280 | Modern Philosophy | 3 Cr |
| Two additional | 100-level (or higher) Philosophy courses | $\mathbf{6 C r}$ |
| One $\mathbf{3 0 0}$ - or | 400-level Philosophy courses | $\mathbf{3 C r}$ |


| Ethics and Moral Philosophy Minor (Minimum 18 Cr ) |  |  |
| :---: | :---: | :---: |
| PHIL 120 | Culture, Identity, and Values | 3 Cr . |
| PHIL 125 | The Good Life | 3 Cr . |
| PHIL 250 | Political Philosophy | 3 Cr . |
| PHIL 275 | Ancient and Medieval Philosophy | 3 Cr . |
| PHIL 280 | Modern Philosophy | 3 Cr . |
| One course from the following options: |  | 3 Cr . |
| PHIL 335 | Ethical Theory | 3 Cr . |
| One 400-level ethics-themed* Philosophy course |  | 3 Cr . |



## Philosophy of Religion Minor (Minimum 18 Cr.)

| PHIL 130 | Death and Immortality | 3 Cr |
| :--- | :--- | :--- |
| PHIL 145 | Elementary Logical and Critical Thinking | 3 Cr |
| PHIL 275 | Ancient and Medieval Philosophy | 3 Cr |
| PHIL 280 | Modern Philosophy | 3 Cr |
| PHIL 330 | Philosophy of Religion | 3 Cr |
| One course from the following options: | $\mathbf{3 ~ C r}$ |  |
| PHIL 410 | Theory of Knowledge | 3 Cr |
| PHIL 420 | Metaphysics | $\mathbf{3 C r}$ |


| PHIL 145 | Elementary Logical and Critical Thinking | 3 Cr . |
| :---: | :---: | :---: |
| PHIL 205 | Science and the Interpretation of Reality | 3 Cr . |
| PHIL 280 | Modern Philosophy | 3 Cr . |
| PHIL 410 | Theory of Knowledge | 3 Cr . |
| Two courses from the following options: |  | 3 Cr . |
| PHIL 245 | Formal Logic and Critical Thinking | 3 Cr . |
| PHIL 275 | Ancient and Medieval Philosophy | 3 Cr . |
| PHIL 285 | History of $20^{\text {th }}$ Century Anglo-American Philosophy | 3 Cr . |
| PHIL 315 | Philosophy of Mind and Language | 3 Cr . |

*Students should consult with their Philosophy advisor or the department chair to determine which courses count as "ethicsthemed" and "history-themed."

## Approval of Schedules

All students taking a major or minor must have their schedules approved by the chair of the department at the beginning of each semester.

## Prerequisites

Courses numbered 100 are considered introductory courses. Courses numbered 200 are considered advanced introductory courses and require sophomore standing or consent of the instructor. Courses numbered 300 and above are considered advanced courses and have, as prerequisite, any one course numbered under 300, or sophomore standing in Christ College, or consent of the instructor. Courses numbered 400 and above are designed for majors and minors.

## General Education

Any course in philosophy except PHIL 145 and PHIL 245 will satisfy the Humanities: Philosophy General Education Requirement, but students will usually be best served by choosing a course at the 100 or 200 level. PHIL 145 and PHIL 245 will satisfy the Quantitative Analysis General Education Requirement. PHIL 330 satisfies the upper level Theology requirement. PHIL 120 and PHIL 220 may be used to fulfill the Cultural Diversity course requirement.

## Philosophy Courses

A study of the fundamental philosophical questions that arise as we attempt to understand the world around us and our experience of it. Topics covered may include the nature of time, space, and matter, the existence of God and of human souls, the nature of the human person and of consciousness, the reliability of sense-perception and the possibility of knowledge, the compatibility of faith, reason, and science, and so on.

PHIL $120 \quad$ Culture, Identity, and Values 3 Cr.
A study of the basic assumptions and arguments that underlie and support treating identity and culture as distinct categories and moral goods. Topics may relate to the nature of personal identity and collective belonging, the implications they have for the idea of a universal human nature, and the limits of society's obligation to protect personal expression. May be used to fulfill the Cultural Diversity or Humanities: Philosophy General Education Requirement.

PHIL 125 The Good Life
3 Cr.
An introduction to philosophical thought about the shape and substance of a good human life. What might such a life look like? Would it be a life of pleasure or of moral rectitude? A life of self-effacing service to others, or of selffulfillment? Possibly a life of religious devotion and union with the Divine? Is there one model that stands out as uniquely correct, or are there many equally good models-and what makes a model good in the first place? These and other similar questions may be covered.

PHIL 130 Death and Immortality 3 Cr .
A philosophical inquiry into questions surrounding death and the possibility of life after death. What is death, and why does it exist? Is it good, bad, or neutral? Is the idea of an afterlife plausible? Are some models of the afterlife, such as resurrection or reincarnation, more plausible than others? Do "near-death experiences" give us evidence for the reality of an afterlife? These and similar questions may be covered.

PHIL 145 Elementary Logical and Critical Thinking
3 Cr.
An introduction to strategies for constructing and evaluating arguments. Emphasis is placed on the development of skills needed to deal competently with arguments encountered in everyday life as well as on some of the more formal techniques of logical analysis. May be used to fulfill the Quantitative Analysis component of the General Education Requirements. May not be used to fulfill the Humanities component of the General Education Requirements. Prerequisite: MATH 111 or placement higher than Math 111 in the math placement process.

PHIL 190 Introductory Topics in Philosophy 3 Cr.
Introductory-level study of a focused philosophical theme or issue. This course may be repeated for credit if the topics are different. Fulfills Humanities: Philosophy General Education requirement.

PHIL 205 Science and the Interpretation of Reality
3 Cr.
A study of the philosophical questions surrounding science as a field of knowledge and as a cultural institution. What is science, and how do we distinguish between science and non-science? Does science yield knowledge of reality, or does it merely generate plausible models whose significance comes from their practical applications (technology)? Is scientific knowledge superior to non-scientific knowledge, and does science therefore deserve the place of authority that it has in Western (and, increasingly, global) culture? These and related issues may be covered. Prerequisite: sophomore standing or consent of the instructor.

PHIL 220 Asian Philosophy
3 Cr.
An introduction to major philosophical themes in Asian thought. Emphasis is placed upon the analysis of primary texts. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. Prerequisite: sophomore standing or consent of the instructor.

Philosophy of Religion
(Also offered as THEO 335.) A philosophical analysis of some of the beliefs, concepts, and problems involved in traditional theistic belief and its critics, exploring how these debates impact the church and its beliefs. Problems include arguments for the existence of God, religious experience, the problem of evil, and faith and reason. Prerequisite: one course in philosophy or THEO 200.

Ethical Theory
A study of some significant ethical theories and issues. Emphasis is on issues concerning the nature of moral discourse and practice: the existence of objective moral values, the relation of religion and morality, the possibility of moral knowledge, and the place of reason and convention in moral discourse and practice. Prerequisite: any two courses in philosophy or consent of the instructor.

Metaphysics
An examination of traditional and contemporary metaphysical topics, such as time, substance, agency, freedom, appearance and reality, persons, and the mind-body problem. Prerequisite: PHIL 145, PHIL 245, MATH 131, or consent of the instructor. Fulfills Humanities: Philosophy General Education requirement.

## Advanced Philosophical Topics

An examination of the work on one major philosopher such as Aristotle, Wittgenstein, or Kant, or of a single philosophical approach such as Augustinianism or phenomenology, or of one philosophical problem such as free will or moral realism. Prerequisite: PHIL 275 and PHIL 280 or consent of the instructor.

PHIL 475 Advanced History of Philosophy
3 Cr .
An advanced study of the major philosophical themes of some period, for example, nineteenth century German philosophy, eighteenth century Scottish philosophy, or medieval philosophy. Prerequisite: PHIL 275 and PHIL 280 or consent of the instructor.

A seminar required of all philosophy majors in their senior year. An examination of the nature and value of philosophy through the study of some philosophical problem, and classic and contemporary texts. Prerequisite PHIL 275 and PHIL 280 or consent of the instructor.

PHIL 495 Independent Projects 1-3 Cr .
A student may undertake independent study of some person, problem, theme, etc., under the supervision of some member of the Philosophy Department. The student will propose a topic, generate a bibliography, and specify the scope and goals of the study.

Honors Work in Philosophy
3 Cr .
See Honors Work, page 63.
PHIL 498 Honors Candidacy in Philosophy 3 Cr

See Honors Work, page 63.

## Physics and Astronomy

Learn more about the Department of Physics and Astronomy at Valpo online.

## Professors Biermann, Hrivnak, Manweiler, Stanislaus, Zygmunt; Associate Professors Gibson-Even, Hillwig (chair), Richter; Assistant Professors He; Visiting Assistant Professor Bans.

Physics is the study of natural phenomena in an attempt to explain the interactions of matter and energy in terms of a limited number of fundamental laws. This study is predicated on careful observation and experimentation, thoughtful analysis, and creative insights. It is both descriptive and prescriptive and encompasses a realm from the submicroscopic particles of the atomic nucleus to the distant constituents of the universe.

In this context, the Physics and Astronomy Department offers a program of study to prepare students for graduate study and for entry-level work as a physicist in government or industry. Fields of study and employment include, but are not limited to, atomic physics, nuclear physics, elementary particle physics, molecular physics, condensed matter physics, quantum electronics, laser optics, astronomy, astrophysics, atmospheric physics, geophysics, biophysics, medical physics, computational physics, electrical engineering, nuclear engineering, scientific writing and reporting, high school physics teaching, patent law, and scientific equipment sales.

The department is well equipped, having a particle accelerator, an astronomical observatory, a surface physics laboratory, and extensive computer resources. Students pursue research projects under the direction of members of the faculty.

The department sponsors a local chapter of the National Society of Physics Students. Qualified students are elected to membership in the national honor society, Sigma Pi Sigma. More information about the department can be found on the internet at http://www.valpo.edu/physics.

Qualified students may obtain cooperative education experiences in a variety of employment situations, including research laboratories and industrial and engineering companies. Up to four credits may be counted towards the minimum 28 credit hours needed for a physics major. With departmental approval, PHYS 481-483 or PHYS 497 may be substituted for PHYS 445 . For further information, refer to Cooperative Education, College of Arts and Sciences, page 63.

## Major

There are four different options a student may choose to pursue. All four options share 19 credit hours of required courses in common, thus making it easy for students to switch from one to another if their career objectives change.

## Bachelor of Science - Physics Major (Minimum 32 Cr.)

| Core Courses |  |  |
| :---: | :---: | :---: |
| PHYS 141 | Newtonian Mechanics | 3+0, 3 Cr . |
| PHYS 141L | Experimental Physics I | 0+3, 1 Cr . |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| PHYS 142L | Experimental Physics II | 0+3, 1 Cr . |
| PHYS 243 | Physics: Atoms and Nuclei | 3 Cr . |
| PHYS 245 | Experimental Physics III | 0+3, 1 Cr . |
| PHYS 246 | Data Reduction and Error Analysis | 1 Cr . |
| PHYS 250 | Mechanics | 3 Cr . |
| PHYS 281 | Electricity and Electronics | 2.5+1.5, 3 Cr . |
| PHYS 345 | Experimental Physics IV | 0+3, 1 Cr . |
| PHYS 360 | Thermal Physics | 3 Cr . |
| PHYS 371 | Electromagnetic Fields | 3 Cr . |
| PHYS 445 | Senior Research in Physics (2 credits) | 0+3, 1-2 Cr. |
| PHYS 499 | Physics and Astronomy Colloquium | 0 Cr . |
| Additional Recommended Courses |  |  |
| One year of Chemistry |  |  |
| PHYS 490 | The Scientific Endeavor | 3 Cr . |

Two concentrations within the physics major have been designed to meet students' educational and career goals. The departmental advisor will assist students in selecting the most appropriate physics concentration and the courses that apply within the department.

The Fundamental Physics Concentration is intended for students primarily interested in pursuing a career in physics and who intend to pursue graduate study in physics. In addition to the core courses, the following courses are recommended: PHYS 372, 381, $421,422,430,430 \mathrm{~L}$, and 440 . MATH 330 and 334 are also recommended.

The Applied Physics Concentration is intended for students interested in the application of physics to problems in a business or industrial environment. In addition to the core courses, students are advised to complete the major by electing courses most closely associated with the physics application intended. Participation in the University's Cooperative Education Program (see page 63) is strongly recommended to give the student practical work experience. The Applied Physics option is most useful to students who will seek employment immediately after graduation.

Mechanics and Materials-for careers in research and development fields involving mechanics and materials science. In addition to the major, students are encouraged to complete the Mechanics and Materials minor described below.

Electronics-for careers in research and development fields involving electronic devices. In addition to the major, students are encouraged to complete the Electronics minor described below.

Computational Physics-for computer-related applications of physics and computational problem solving. In addition to the major, students are encouraged to complete the Computer Science minor (page104).

Industrial Project Management-for management and project leadership in technological and scientific environments in business and industry. In addition to the major, students are encouraged to complete the Fundamentals of Business Minor (page371).

## Bachelor of Science - Astronomy Major (Minimum 32 Cr.)

| Core Courses |  |  |
| :---: | :---: | :---: |
| ASTR 101 | Astronomy | 3+0, 3 Cr. |
| ASTR 101L | Astronomy Laboratory | $0+3,1 \mathrm{Cr}$. |
| ASTR 221 | Observational Astronomy | 0+3, 1 Cr . |
| ASTR 252 | Introduction to Stellar Astrophysics | $3+0,3 \mathrm{Cr}$. |
| ASTR 253 | Introduction to Galactic Astrophysics and Cosmology | 3+0, 3 Cr . |
| ASTR 445 | Senior Research in Astronomy ( 2 credits) | 0+3, 1-2 Cr. |
| PHYS 141 | Newtonian Mechanics | $3+0,3 \mathrm{Cr}$. |
| PHYS 141L | Experimental Physics I | 0+3, 1 Cr . |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| PHYS 142L | Experimental Physics II | $0+3,1 \mathrm{Cr}$. |
| PHYS 243 | Physics: Atoms and Nuclei | 3 Cr . |
| PHYS 245 | Experimental Physics III | 0+3, 1 Cr . |
| PHYS 246 | Data Reduction and Error Analysis | 1 Cr . |
| PHYS 250 | Mechanics | 3 Cr . |
| PHYS 360 | Thermal Physics | 3 Cr . |
| PHYS 499 | Physics and Astronomy Colloquium | 0 Cr . |
| Courses Recommended For Students Intending to Pursue Graduate Study in Astronomy or Astrophysics: |  |  |
| PHYS 371 | Electromagnetic Fields | 3 Cr . |
| PHYS 381 | Advanced Mechanics | 3 Cr . |
| PHYS 421 | Quantum Mechanics I | 3 Cr . |
| Additional Recommended Courses |  |  |
| One year of Chemistry |  |  |
| PHYS 490 | The Scientific Endeavor | 3 Cr . |

## Bachelor of Science - Physics and Astronomy Education (Minimum 32 Cr .)

| Core Courses |  |  |
| :---: | :---: | :---: |
| ASTR 101 | Astronomy | 3+0, 3 Cr . |
| ASTR 101L | Astronomy Laboratory | $0+3,1 \mathrm{Cr}$. |
| PHYS 141 | Newtonian Mechanics | 3+0, 3 Cr . |
| PHYS 141L | Experimental Physics I | $0+3,1 \mathrm{Cr}$. |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| PHYS 142L | Experimental Physics II | $0+3,1 \mathrm{Cr}$. |
| PHYS 243 | Physics: Atoms and Nuclei | 3 Cr . |
| PHYS 245 | Experimental Physics III | 0+3, 1 Cr. |
| PHYS 246 | Data Reduction and Error Analysis | 1 Cr . |
| PHYS 250 | Mechanics | 3 Cr . |
| PHYS 360 | Thermal Physics | 3 Cr . |
| PHYS 445 | Senior Research in Physics (1 credit) | 0+3, 1-2 Cr. |
| PHYS 499 | Physics and Astronomy Colloquium | 0 Cr . |
| One group from the following options: |  |  |
| PHYS 345 and | Experimental Physics IV | 0+3, 1 Cr . |
| PHYS 371 | Electromagnetic Fields | 3 Cr . |
| ASTR 221 and | Observational Astronomy | $0+3,1 \mathrm{Cr}$. |
| ASTR 252 | Introduction to Stellar Astrophysics | 3+0, 3 Cr . |
| Additional Recommended Courses |  |  |
| One year of Chemistry |  |  |

In addition, students intending to meet licensure requirements for secondary education will complete ED 390, NS 490, and the required courses and professional field experience, including PHYS 489. A cumulative GPA of 2.50 is required for admission to the Professional Semester and to be eligible for recommendation for licensure. See the description of the secondary education program on page 119 for more details.

## Bachelor of Arts - Physics Major (Minimum 28 Cr.)

| Core Courses |  |  |
| :---: | :---: | :---: |
| PHYS 141 | Newtonian Mechanics | 3+0, 3 Cr . |
| PHYS 141L | Experimental Physics I | 0+3, 1 Cr . |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| PHYS 142L | Experimental Physics II | $0+3,1 \mathrm{Cr}$. |
| PHYS 243 | Physics: Atoms and Nuclei | 3 Cr . |
| PHYS 245 | Experimental Physics III | 0+3, 1 Cr . |
| PHYS 246 | Data Reduction and Error Analysis | 1 Cr . |
| PHYS 250 | Mechanics | 3 Cr . |
| PHYS 281 | Electricity and Electronics | 2.5+1.5, 3 Cr . |
| PHYS 345 | Experimental Physics IV | 0+3, 1 Cr . |
| PHYS 360 | Thermal Physics | 3 Cr . |
| PHYS 371 | Electromagnetic Fields | 3 Cr . |
| PHYS 445 | Senior Research in Physics (2 credits) | 0+3, 1-2 Cr. |
| PHYS 499 | Physics and Astronomy Colloquium | 0 Cr . |
| Additional Recommended Courses |  |  |
| One year of Chemistry |  |  |
| PHYS 490 | The Scientific Endeavor | 3 Cr . |

It is assumed that students will acquire competency in at least one computer programming language (FORTRAN, C, C++). Electives used to complete the minimum major requirements must be drawn from PHYS and ASTR courses at the 200-level and above, but cannot include more than 1 credit hour of PHYS/ASTR 492.

## Physics Minor (Minimum 16 Cr.)

| PHYS 141 | Newtonian Mechanics | $3+0,3 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| PHYS 141L | Experimental Physics I | $0+3,1 \mathrm{Cr}$. |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$ |
| PHYS 142L | Experimental Physics II | $0+3,1 \mathrm{Cr}$. |
| PHYS 243 | Physics: Atoms and Nuclei | 3 Cr. |
| One course from the following options: |  |  |
| ASTR 221 | Observational Astronomy |  |
| PHYS 245 | Experimental Physics III | $0+3,1 \mathrm{Cr}$. |
| PHYS 246 | Data Reduction and Error Analysis | $0+3,1 \mathrm{Cr}$. |

## Mechanics and Materials Minor (Minimum 16 Cr.)

| PHYS 109 | Mechanics-Statics | 3 Cr. |
| :--- | :--- | ---: |
| PHYS 352 | Materials Science | $2.5+1.5,3 \mathrm{Cr}$. |
| PHYS 440 | Condensed Matter Physics | 3 Cr. |
| Seven credits from the following options: |  |  |
| PHYS 215 | Mechanics of Materials | 3 Cr. |
| PHYS 333 | Mechanical Measurements Laboratory | $3+3,4 \mathrm{Cr}$. |
| ME 462 | Vibrations | $2.5+1.5,3 \mathrm{Cr}$. |

## Electronics Minor (Minimum 16 Cr.)

| PHYS 342 | Electronics | $3.5+1.5,3 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| PHYS 372 | Electromagnetic Waves and Physical Optics | 3 Cr. |
| PHYS 440 | Condensed Matter Physics | 3 Cr. |
| Seven credits from the following options: |  |  |
| PHYS 322 | Embedded Microcontrollers | $2.5+1.5,3 \mathrm{Cr}$. |
| ECE 221 | Digital Logic Design | $2.5+1.5,3 \mathrm{Cr}$ |
| ECE 222 | Advanced Logic Design | $2.5+1.5,3 \mathrm{Cr}$ |
| ECE 261 | Linear Circuit Theory I | $2.5+1.5,3 \mathrm{Cr}$ |
| ECE 262 | Linear Circuit Theory II | $2.5+1.5,3 \mathrm{Cr}$. |

## Degrees

Completion of the degree requirements of the College of Arts and Sciences with a major in physics leads to the Bachelor of Arts degree or the Bachelor of Science degree. Completion of the degree requirements of the College of Arts and Sciences with a major in astronomy leads to the Bachelor of Science degree.

## Credit by Examination

Credit for PHYS 111, 111L, 112, 112L, 141, 141L, 142, or 142L may be earned through the Advanced Placement examinations offered by the College Entrance Examination Board.

## Approval of Schedules

All students taking a major or minor in physics or astronomy and all students planning to teach physics or astronomy must have their schedules approved by the department advisor.

## Astronomy Courses


#### Abstract

ASTR 101 Astronomy 3+0, 3 Cr A study of the history of mankind's view of the universe including our contemporary understanding of the physical universe. The tools and techniques employed by contemporary astronomers to probe the universe are studied. Topics include the structure of the solar system as revealed by modern space probes, the sun, stellar systems and classification, and the structure and evolution of stars, galaxies, and the universe. Special topics such as neutron stars, black holes, and the big bang model may also be examined. Only elementary mathematics is required. This course, along with ASTR 101L, may be used to fulfill the Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.


## ASTR 101L

Astronomy Laboratory
$0+3,1 \mathrm{Cr}$.
Laboratory experiences designed to give students personal experience with astronomical equipment, including the astronomical observatory, and with the analysis of astronomical data. Techniques and skills appropriate to physical sciences will also be stressed. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment. Prerequisite or concurrent registration: ASTR 101 or ASTR 252.

Topics in Astronomy and Space Science
1-2 Cr.
The study of various topics of current interest in astronomy and space science, on an introductory level. Prerequisites are dependent on the topic. Interested students are urged to consult the instructor or the department chair for specific information.

## Observational Astronomy

$0+3,1 \mathrm{Cr}$.
Practical observational experience using the 16 inch reflecting telescope and astronomical instrumentation including photographic cameras, spectrograph and CCD camera, and computer. Normally offered in the spring semester of odd numbered years. Prerequisite: ASTR 101 and 101L or ASTR 252 or consent of the instructor.

Topics in Astronomy
1-4 Cr.
The study of various topics of current interest in astronomy and space science. Prerequisites are dependent on the topic. Interested students are urged to consult the instructor or the department chair for specific information.

Senior Research in Astronomy<br>$0+3,1-2 \mathrm{Cr}$

This course is identical to PHYS 445 but with a specific focus on problems in astronomy. See PHYS 445 for details. Prerequisites: ASTR 221 and ASTR 252.

Research or Reading in Astronomy
0.5-3 Cr.

Research or reading in astronomy, under the supervision of a faculty member. Prerequisite: consent of the chair of the department. No more than 1 credit hour of ASTR 492/PHYS 492 may be used to satisfy the minimum requirements for a physics or astronomy major.

## Physics Courses

Mechanics-Statics
(Also offered as GE 109.) A course in the resolution and composition of forces and moments as applied to the free body diagram. Topics include principles of equilibrium, first and second moments of areas, study of trusses, frames, and machines, and friction. Prerequisites: MATH 131 and PHYS 141 or PHYS 151.

## PHYS 111 Essentials of Physics 3+0, 3 Cr.

The development of basic concepts of physics emphasizes intuition, logic, and experiment rather than complex mathematical analysis. Specific topics included are space, time, motion, energy, conservation laws, fluids, sound, and heat. Not open to students who have taken PHYS 141. This course along with PHYS 111L may be used in fulfillment of the Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment.

## PHYS 111L

Essentials of Physics Laboratory
$0+3,1 \mathrm{Cr}$.
Laboratory experiments test and illustrate fundamental physics concepts and laws closely related to those studied in PHYS 111. Emphases are placed on experiential learning and on the development of laboratory skills in physical science. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement assessment. Prerequisite or concurrent registration: PHYS 111. Not open to students who have taken PHYS 141L.
PHYS 112 Essentials of Physics 3+0, 3 Cr.

This course is a continuation of PHYS 111. Specific topics include the study of electricity and magnetism, wave phenomena, optics, relativity, and atomic and nuclear physics. Prerequisites: PHYS 111 and 111L or consent of the instructor. This course along with PHYS 112L may be used in fulfillment of the Natural Science component of the General Education Requirements.

PHYS 112L Essentials of Physics Laboratory 0+3, 1 Cr . Laboratory experiments test and illustrate fundamental physics concepts and laws closely related to those studied in PHYS 112. Emphases are placed on experiential learning and on the continued development of laboratory skills in physical science. Prerequisite: PHYS 111L. Prerequisite or concurrent registration: PHYS 112. Not open to students who have taken PHYS 142L.

PHYS 141 Newtonian Mechanics 3+0,3 Cr.
A study of classical mechanics, including static and dynamic systems, for students of physics, engineering, chemistry, and meteorology. Applications of calculus are made as appropriate. This course along with PHYS 141L may be used in fulfillment of the Natural Science component of the General Education Requirements. Prerequisite or concurrent registration: MATH 131.

PHYS 141L Experimental Physics I
$0+3,1 \mathrm{Cr}$.
Laboratory experiments test and illustrate fundamental physics concepts and laws closely related to those studied in PHYS 141. Emphasis is placed on the development of laboratory skills in physics. Prerequisite or concurrent registration: PHYS 141. Not open to students who have taken PHYS 111L.

Physics: Electricity, Magnetism and Waves
3+0, 3 Cr.
A continuation of PHYS 141 which treats electricity, magnetism, wave motion, and optics. Prerequisite: PHYS 141 and 141L or advanced placement by permission of the chair of the department, MATH 132 or concurrent registration. This course along with PHYS 142L may be used in fulfillment of the Natural Science component of the General Education Requirements.
PHYS 142L Experimental Physics II 0+3, 1 Cr .
Laboratory experiments test and illustrate fundamental physics concepts and laws closely related to those studied in PHYS 142. Emphasis is placed on the development of laboratory skills in physics. Prerequisite: PHYS 141L. Prerequisite or concurrent registration: PHYS 142. Not open to students who have taken PHYS 112L.

Electricity and Electronics
$2.5+1.5,3 \mathrm{Cr}$.
(Also offered as ECE 261.) A study of the fundamental methods of electrical circuit analysis with emphasis on computer-aided analysis, AC and DC circuits, and operational amplifiers. Laboratory exercises emphasize measurement techniques and reinforce lecture material. Prerequisite: MATH 131.
Newtonian Mechanics - Honors
$3+0,3 \mathrm{Cr}$.
A study of classical mechanics, including static and dynamic systems, for students of physics, engineering, chemistry, and meteorology. The pace of this course and the subject matter will be similar to that in PHYS 141. However, students are assumed to be proficient in differential and integral calculus at the outset, and applications of calculus are made throughout the course. This course along with PHYS 141L may be used in fulfillment of the Natural Science component of the General Education Requirements. Prerequisite: MATH 132 or concurrent registration, equivalent AP credit, or the permission of the instructor.

Physics: Electricity, Magnetism and Waves - Honors
$3+0,3 \mathrm{Cr}$.
A continuation of PHYS 151 which treats electricity, magnetism, wave motion, and optics. This course along with PHYS 142L may be used in fulfillment of the Natural Science component of the General Education Requirements. Prerequisite: PHYS 151 or consent of the instructor. Corequisite: MATH 132.

Topics in Physics 1-4 Cr.
A study of various topics of current interest in physics. Prerequisites are dependent upon the topic. Interested students are urged to contact the instructor or chair of the department for specific information.

Mechanics of Materials
3 Cr .
(Also offered as CE 215 or ME 215.) Concepts of stress and strain, stress-strain relationships, states of plane stress and strain at a point; elementary analysis of stress distributions and deformations for axial loading of prismatic members, torsional loading of circular shafts and bending of beams, combined loading, plastic elastic action, and an introduction to statically indeterminate problems. Prerequisite: PHYS 109.

Physics: Atoms and Nuclei
3 Cr .
An introduction to the special theory of relativity, physics of the atom, the Schroedinger wave equation, physics of condensed matter, physics of the nucleus including radioactivity, and elementary particles. Prerequisites: PHYS 142 and MATH 132 (may be taken concurrently).

Experimental Physics III
$0+3,1 \mathrm{Cr}$.
Selected experiments include both the measurement of fundamental constants such as the speed of light, Planck's constant, the gravitational coupling constant, as well as investigations of fundamental physical processes. The further development of laboratory skills and methods of data analysis are emphasized, using advanced computer analysis and data acquisition techniques. Prerequisite: PHYS 142 and 142L. Normally offered in spring semesters.
Data Reduction and Error Analysis
1 Cr .
The study and application of various techniques employed in the reduction and analysis of laboratory data to include probability distributions, regressions, tests of goodness of fit, data smoothing, and the methods for determining the errors of measured and fitted parameters. Extensive use of the computer is expected. Prerequisite: MATH 253.

Mechanics
3 Cr .
The classical mechanics of particles, systems of particles and rigid bodies, utilizing analytical techniques of vectors and differential and integral calculus. Among the topics included are Newton's laws of motion in one and three dimensions, conservation laws, harmonic oscillation, central force motion, scattering, and an introduction to rigid body motion. Prerequisites: PHYS 142 and MATH 253 (may be taken concurrently).

## Embedded Microcontrollers

2.5+1.5, 3 Cr.
(Also offered as ECE 322). The application of microcontrollers in embedded system design, emphasizing the interaction of hardware and software design. Topics include integrated development environments, CPUs, program and data memories, interrupts, digital inputs and outputs, timer peripherals, serial communication interfaces, and analog-to-digital converter peripherals. Course includes a laboratory component. Prerequisite: ECE 221 and ECE 251 with a minimum grade of C .
(Also offered as ME 333.) A study of fundamental concepts and physical principles involved in the science of measurement and design of experiments. Experiments involve calibration and testing (both static and dynamic) of primary elements, signal amplifiers, transducers, and readout devices. Experimentation utilizes laboratory and industrial instruments. Extensive use is made of computer data acquisition and analysis. Course includes a laboratory component. Corequisite: ME 225 or ECE 250; prerequisites: CORE 110, PHYS 142 and ME 270.

## Electronics

$2.5+1.5,3 \mathrm{Cr}$.
(Also offered as ECE 340.) An introduction to semiconductor theory and the design and analysis of electronic circuits. Topics include diodes, field-effect and bipolar transistors, CMOS logic circuits, single-state discrete transistor amplifiers, and multistage integrated-circuit amplifiers. Course includes a laboratory component. Prerequisite: ECE 261 with a minimum grade of C .

Topics in Physics
1-4 Cr.
A study of various topics of current interest in physics. Prerequisites are dependent upon the topic. Interested students are urged to contact the instructor or chair of the department for specific information.

Quantum Mechanics I 3 Cr .
The fundamental concepts and principles of quantum physics are developed in a mathematically rigorous way and applied to atomic, nuclear, and solid state physics. Topics include the fundamental postulates of quantum mechanics, the Schroedinger equation, and selected topics such as the harmonic oscillator, orbital and spin angular momentum, the hydrogen atom, identical particles, elementary matrix mechanics, multi-electron atoms, and collision theory. Normally offered in the fall semester of odd numbered years. Prerequisites: PHYS 243 and MATH 265 or MATH 270 (both prerequisites may be taken concurrently with permission of the instructor).

## PHYS 422

## PHYS 430

## PHYS 430L

A continuation of PHYS 421, with further development and application of quantum theory. Topics may include time independent and time dependent perturbation theory with applications, scattering theory, matrix mechanics, multi-electron and molecular systems, elementary Hartree-Fock theory, superconductivity, and elementary relativistic quantum mechanics. Normally offered in the spring semester of even numbered years. Prerequisite: PHYS 421 or the permission of the instructor.

## Nuclear Physics

3 Cr.
Nuclear physics for students with physics or engineering backgrounds. Topics include nuclear models, nuclear reactions, alpha, beta, and gamma radioactivity, and fission physics. Prerequisite: PHYS 243. Normally offered in the spring semester of even numbered years.

Nuclear Physics Laboratory
$0+3,1 \mathrm{Cr}$.
An advanced laboratory to study nuclear reactions, nuclear structure, and radioactivity. Experiments may use the 300 keV particle accelerator and a neutron howitzer. Normally offered in the spring semester of even numbered years. Prerequisites: PHYS 246 and PHYS 345; Corequisite: PHYS 430.

A presentation of the basic concepts of the quantum theory of matter, with emphasis on physical models which provide a quantitative description of the solid state. Topics includes crystal structure, diffraction, the reciprocal lattice, chemical bonding in molecules and solids, lattice dynamics, phonons, thermal properties, the free electron gas, electrons in a periodic lattice, band structure, semiconductors, magnetic and optical properties, and superconductivity. Normally offered in the spring semester of odd numbered years. Prerequisite: PHYS 243.

Senior Research in Physics
$0+3,1-2 \mathrm{Cr}$.
Each student undertakes a physics research problem. A written report and an oral presentation at the Physics Colloquium are required. Student research problems must be approved by the department. Prerequisite: consent of the chair of the department. Two credits are required for the physics major and the astronomy major. May be taken as two credits in one semester or preferably as one credit in each of two consecutive semesters.

## Cooperative Education in Physics I

$0.5-3 \mathrm{Cr}$.
Experience in basic or applied physics with a cooperating employer. Midterm and final written reports required. Prerequisites: PHYS 245 and approval of the chair of the department. S/U grade.

Cooperative Education in Physics II-III 0.5-3 Cr.
Continuation of PHYS 481. Midterm and final written reports required. Prerequisites: PHYS 481 and approval of the chair of the department. S/U grade.

Cooperative Education in Physics III
$0.5-3 \mathrm{Cr}$.
Continuation of PHYS 482. Midterm and final written reports required. Prerequisites: PHYS 482 and approval of the chair of the department. S/U grade. May be repeated beyond 483 for additional credit.

The Scientific Endeavor
3 Cr .
(Also offered as CHEM 490 and NS 490.) An exploration of the scientific enterprise involving a study of foundational principles and assumptions of the scientific endeavor, its various methodologies, and its scope and limitations. This will include illustrations from historical case studies and "scientific revolutions." Students will also study the ethical and moral connections between their personal and professional science lives. Prerequisite: junior or senior standing. This course may not be used to fulfill the minimum requirements of a physics or astronomy major. This course may be used to fulfill the Humanities: Philosophy requirement of the General Education Requirements when cross-listed with CC 300.

Research or Reading in Physics
$0.5-3 \mathrm{Cr}$.
Research or reading in physics, under the supervision of a faculty member. Prerequisite: consent of the chair of the department. No more than 1 credit hour of PHYS 492/ASTR 492 may be used to satisfy the minimum requirements for a physics or astronomy major.

## Honors Work in Physics

See Honors Work, page 63.
PHYS 498 Honors Candidacy in Physics 3 Cr.
See Honors Work, page 63.
PHYS 499
Physics and Astronomy Colloquium
All physics and astronomy majors are expected to register for this course. S/U grade.


## Political Science and International Relations

Learn more about the Department of Political Science and International Relations at Valpo online.

## Associate Professors Atchison, Hora, G. Johnson (chair), Lin; Assistant Professors Feld, Old; Visiting Assistant Professor Boehlefeld.

Historically, political science has occupied a central position in liberal arts. The study of politics focuses on the values that humans should seek and the particular legal and structural organizations that allow us to realize our desired values. Contemporary political science combines this concern for normative issues with an additional focus on scientific procedures and empirical and quantitative methodology.

The study of politics and international relations has never been more important than today. More so than ever before, events that occur across the globe and in remote places around the world impact our daily lives. As a result of revolutionary technological change, relations within and between states are being reconfigured almost daily. The majors in Political Science and International Relations at Valparaiso University give students the background, experience, and analytical tools to make sense of, and prepare for dealing with this dynamic and rapidly changing world. A major in political science may lead to careers in many fields including, but not limited to, law, criminal justice, business, education, government service at the state, national, local, and international level, politics, policy analysis, campaign management, and work for private interest groups. Many political science graduates eventually go on to law school and other graduate programs.

The department sponsors a series of informal events where a variety of topics are discussed. The department also recognizes outstanding student achievement through membership in the Beta Nu Chapter of Pi Sigma Alpha, the national political science honor society.

## Special Programs

For information concerning the Lutheran College Washington Consortium Semester see page 12.

## Community Research and Service Center

The Department of Political Science and International Relations has established the Community Research and Service Center. The primary goals of the center are the following: first, to provide research assistance and other services to government, not-forprofit organizations, and, in some instances, business in Northwest Indiana; second, to provide students the opportunity to learn in an applied setting. Students become integral parts of the center by taking certain courses or working as paid associates and in the process learn basic research methods and gain practical experience in working for and dealing with government, business, and other organizations.

Political Science and International Relations

## Bachelor of Arts - Political Science Major (Minimum 30 Cr.)

| POLS 120 | The Government of the United States | 3 Cr . |
| :---: | :---: | :---: |
| POLS 130 | Comparative Politics | 3 Cr . |
| POLS 240 | Political Theory | 3 Cr . |
| POLS 493 | Senior Seminar in Political Science | 3 Cr . |
| One concentration from the following options: |  |  |
| General Political Science |  | 18 Cr. |
| 18 additional credits of Political Science courses |  | 18 Cr. |
| Legal Studies Concentration |  | 18 Cr . |
| At least fifteen of the remaining eighteen Political Science credits from the following options: |  |  |
| POLS 170 | The Field of Law | 1 Cr . |
| POLS 261 | State and Local Politics in the United States | 3 Cr . |
| POLS 271 | The Judicial Process | 3 Cr . |
| POLS 290 | Topics in Political Science (when topic is appropriate) | 3 Cr . |
| POLS 352 | Model United Nations | 3 Cr . |
| POLS 371 | Constitutional Law I | 3 Cr . |
| POLS 372 | Constitutional Law II | 3 Cr . |
| POLS 386 | Internship in Political Science (when topic is appropriate) | 1-7 Cr. |
| POLS 390 | Advanced Topics in Political Science I (when topic is appropriate) | 3 Cr . |
| POLS 450 | International Regimes and Global Governance | 3 Cr . |
| POLS 490 | Advanced Topics in Political Science II (when topic is appropriate) | 1-3 Cr. |
| Public Policy and Administration Concentration |  | 18 Cr . |
| POLS 290 | Topics in Political Science (when topic is appropriate) | 3 Cr . |
| POLS 360 | Public Administration | 3 Cr . |
| POLS 361 | Public Policy | 3 Cr . |
| At least nine of the remaining twelve Political Science credits from the following options: |  |  |
| POLS 210 | Research Methods in Political Science | 3 Cr . |
| POLS 221 | Political Behavior | 3 Cr . |
| POLS 261 | State and Local Politics in the United States | 3 Cr . |
| POLS 271 | The Judicial Process | 3 Cr . |
| POLS 320 | Politics of Urban and Metropolitan Areas | 3 Cr . |
| POLS 326 | The Presidency | 3 Cr . |
| POLS 327 | Congress | 3 Cr . |
| POLS 386 | Internship in Political Science (when topic is appropriate) | 1-7 Cr. |
| POLS 390 | Advanced Topics in Political Science I (when topic is appropriate) | 3 Cr . |
| POLS 437 | Comparative Public Policy | 3 Cr . |
| POLS 438 | Gender and Public Policy in Global Perspective | 3 Cr . |
| POLS 490 | Advanced Topics in Political Science II (when topic is appropriate) | 1-3 Cr. |


| Bachelor of Arts - International Relations Major (Minimum 30 Cr .) |  |  |
| :---: | :---: | :---: |
| POLS 120 | The Government of the United States | 3 Cr . |
| POLS 130 | Comparative Politics | 3 Cr . |
| POLS 150 | International Relations | 3 Cr . |
| POLS 240 | Political Theory | 3 Cr . |
| POLS 493 | Senior Seminar in Political Science | 3 Cr . |
| International Rela |  | 9 Cr . |
| Three courses from the following options: |  |  |
| POLS 210 | Research Methods in Political Science | 3 Cr . |
| POLS 291 | Topics in International Relations | 3 Cr . |
| POLS 351 | American Foreign Policy | 3 Cr . |
| POLS 352 | Model United Nations | 3 Cr . |
| POLS 353 | Principles of Peace and Social Justice | 3 Cr . |
| POLS 359 | Study Abroad Field Research | 3 Cr . |
| POLS 386 | Internship in Political Science (when topic is appropriate) | 1-7 Cr. |
| POLS 391 | Advanced Topics in International Relations I | 3 Cr . |
| POLS 450 | International Regimes and Global Governance | 3 Cr . |
| POLS 454 | International Political Economy | 3 Cr . |
| POLS 456 | War and Conflict | 3 Cr . |
| POLS 491 | Advanced Topics in International Relations II | 3 Cr . |
| Comparative and Area Studies |  | 6 Cr . |
| Two courses from the following options (At least one must be from a specific geographic area.): |  |  |
| POLS 231 | Politics of Developing States | 3 Cr . |
| POLS 291 | Topics in International Relations | 3 Cr . |
| POLS 330 | Politics of Industrialized States | 3 Cr . |
| POLS 332 | Politics of China and East Asia | 3 Cr . |
| POLS 333 | Politics of Africa | 3 Cr . |
| POLS 334 | Politics of the Middle East | 3 Cr . |
| POLS 336 | Politics of Latin America | 3 Cr . |
| POLS 386 | Internship in Political Science (when topic is appropriate) | 1-7 Cr. |
| POLS 391 | Advanced Topics in International Relations I | 3 Cr . |
| POLS 437 | Comparative Public Policy | 3 Cr . |
| POLS 438 | Gender and Public Policy in Global Perspective | 3 Cr . |
| POLS 491 | Advanced Topics in International Relations II | 3 Cr . |

## General Political Science Minor (Minimum 18 Cr.)

| POLS 120 | The Government of the United States | 3 Cr . |
| :---: | :---: | :---: |
| POLS 130 | Comparative Politics | 3 Cr . |
| 12 additional Political Science credits |  | 12 Cr . |
| International Relations Minor (Minimum 18 Cr.$)$ |  |  |
| POLS 120 | The Government of the United States | 3 Cr . |
| POLS 130 | Comparative Politics | 3 Cr . |
| POLS 150 | International Relations | 3 Cr . |
| Two cour | from the International Relations group | 6 Cr . |
| One cours | from the Comparative and Area Studies group | 3 Cr . |

Political Science and International Relations

| Political Science Education Major (Minimum 45 Cr.$)$ |  |  |
| :---: | :---: | :---: |
| POLS 120 | The Government of the United States | 3 Cr . |
| POLS 130 | Comparative Politics | 3 Cr . |
| POLS 150 | International Relations | 3 Cr . |
| POLS 210 | Research Methods in Political Science | 3 Cr . |
| POLS 240 | Political Theory | 3 Cr . |
| POLS 261 | State and Local Politics in the United States | 3 Cr . |
| One course from the following options: |  |  |
| POLS 351 | American Foreign Policy | 3 Cr . |
| POLS 456 | War and Conflict | 3 Cr . |
| One course from the following options: |  |  |
| POLS 326 | The Presidency | 3 Cr . |
| POLS 327 | Congress | 3 Cr . |
| One course from the following options: |  |  |
| POLS 371 | Constitution Law I | 3 Cr . |
| POLS 372 | Constitution Law II | 3 Cr . |
| POLS 493 | Senior Seminar in Political Science | 3 Cr . |
| Additional Required Courses ${ }^{11}$ : |  |  |
| ECON 222 | Principles of Economics Macro | 3 Cr . |
| GEO 102 | Globalization and Development | 3 Cr . |
| GEO 280 | Geography of Cyberspace | 3 Cr . |
| HIST 110 | The World in the Twentieth Century | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |

## Credit by Examination

Credit for POLS 120 and POLS 130 may be earned through the College Level Examination Program subject examination.

## Approval of Schedules

Students taking a major or minor in political science or international relations must have their schedules approved by the appropriate advisor.

## Political Science Courses

POLS 110 Introduction to Politics 3 Cr.
An introduction to the theories, concepts, and issues of politics with particular emphasis on how these apply to problems of ethnicity and diversity in the American political system. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

POLS 120 The Government of the United States 3 Cr.
An introduction to the American national government, with special emphasis on the basic structure, functions, and policies of the system.

POLS 130 Comparative Politics 3 Cr.
Comparative study of Western and non-Western political systems. Includes examination of conceptual frameworks for comparative analysis. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

International Relations
3 Cr .
An examination of the fundamentals of international politics and international organization, particularly the United Nations and its specialized agencies.

POLS 170
The Field of Law
1 Cr .
A course designed to help students prepare for the professional study of law. Open to all students.

[^7]Note: The following courses are not open to freshmen without permission of the chair of the department.
POLS 210 Research Methods in Political Science ..... 3 Cr .An examination of the basic research methods, statistics, and data analysis techniques used by social scientists.An emphasis is on the application of these methods in an applied setting, and students are often involved in acommunity research project. May be used to fulfill the Quantitative Analysis component of the GeneralEducation Requirements. May also be used to fulfill one of the three International Relations courses in the IRLmajor. Prerequisites: sophomore standing or permission of the chair.
POLS 221
An exploration of the sources and consequences of individual and group political behavior. The course will include an extensive consideration of the methods necessary to examine political behavior, including computeraided analysis of survey data.
Political Philosophy
(Also offered as PHIL 250). A survey of the major formulations and problems of Western political thought as developed by political philosophers from the Greeks through the modern era.
State and Local Politics in the United States
3 Cr .
Comparative analysis of state and local political systems in the United States. Emphasis is placed on the contemporary role of states and localities in the development and implementation of public policies.
POLS 271 The Judicial Process 3 Cr
An examination of law and courts as part of the political process with specific emphasis on factors that influence judicial decisions and the impact of court decisions. Prerequisite: POLS 120 or consent of the chair of the department.
Topics in Political Science
3 Cr .
A study of topics in the process, policies, and functions of political science (e.g., political parties, political psychology, etc.). May be repeated for credit if topics are different.
Topics in International Relations
3 Cr .
A study of topics in the process, policies, and functions of international relations or comparative political science (e.g., comparative political parties, political institutions, etc.). May be used to fulfill either an International Relations requirement or a Comparative requirement, when topics are appropriate (as designated by the department chair). May be repeated for credit if topics are different.

POLS 320/520 Politics of Urban and Metropolitan Areas
3 Cr .
This course will examine the politics and policy making of urban and metropolitan governments, and will include special emphasis on issues such as the nature of local decision-making, racial and ethnic politics, education, housing, law enforcement, economic development, and the prospects for regional government. Prerequisite: POLS 120 or consent of the chair of the department.

An examination of the American Presidency, with specific emphasis on the President's constitutional position, the process of nominating and electing a president, presidential power and behavior, and the President's relations with the public and coordinate branches of government. Prerequisite: POLS 120 or consent of the chair of the department

## POLS 327/527

Congress
3 Cr .
A study of the legislative processes in which emphasis is placed on the Congress of the United States and its policy-determining and directing roles. Prerequisite: POLS 120 or the consent of the chair of the department.
POLS 330/530 Politics of Industrialized States

A study of political systems in the industrialized world. Attention is directed primarily at Western and Eastern Europe, but focuses on other industrialized countries as well. Prerequisite: POLS 130 or consent of the chair of the department.

This course examines the politics of contemporary China and East Asia. It traces the cultural and historical legacies affecting political life and the political processes through which nation-state, citizen-subjects, and the organizations and institutions of governance are constructed and interact. It also examines the major political challenges facing the region. Prerequisite: POLS 130 or consent of the chair of the department.

## POLS 333/533 Politics of Africa

3 Cr.
This course explores the economic, social, and political challenges facing Africa today, and places them in historical and global contexts. Key themes include democratization, the origins of conflict, and political and economic development. Prerequisite: POLS 130 or consent of the chair of the department.

## POLS 334/534 Politics of the Middle East

3 Cr .
This course explores the contemporary politics of the Arab world. It focuses on the political development and dynamics of these countries, and their relationships with each other and the rest of the world. Prerequisite: POLS 130 or consent of the chair of the department.

POLS 336/536 Politics of Latin America
3 Cr .
This course examines the politics of Latin America, with a focus on democracy and economic development. The course includes a brief historical overview, an examination of the fight for democracy, an exploration of citizens' political views, and debate regarding major issues facing the region. Prerequisite: POLS 130 or consent of the chair of the department.

After an introduction to the concept of ideology and various approaches to studying ideologies, the course will examine many of the ideologies that developed during the twentieth century and that continue to shape the world in which we live. Topics for reading and discussion include: liberalism and conservatism, socialism and communism, fascism and nationalism, fundamentalism, liberation theology, feminism, environmentalism, and anarchism. The class will examine what each of these have in common as ideologies, how the proponents of each understand the world, and how each has been used to encourage and control political action. Prerequisite: POLS 240 or permission of the department chair.

## POLS 351/551 American Foreign Policy

3 Cr .
The various internal and external factors that influence the formulation and execution of U.S. foreign policy are examined. The course will also cover the substance of foreign policy, as well as the major international problems facing the United States today. Prerequisite: POLS 130, POLS 150, or consent of the chair of the department.

3 Cr .
This course provides an orientation to the operations of the United Nations, including current events, pressing international issues, the basics of international law, and some of the protocol and procedures of international diplomacy. The course will assist students in preparing for their roles as distinguished diplomats at one of the Model United Nations conferences held in Indiana or Illinois (attendance required). Prerequisite: POLS 130, POLS 150, or consent of the chair of the department.
(Also offered as PSJ 201.) This course focuses on social responsibility by examining the means of establishing justice, achieving peace, and resolving conflicts nonviolently. The causes, nature, and processes of conflict are reviewed. That conflicts are frequently rooted in injustice requires an understanding of the nature of social justice. These injustices may arise from economic, political, sociological, religious, and/or psychological sources. The nature and methods of nonviolent conflict resolution and reconciliation are also considered.
POLS 359
POLS 360/560 Public Administration ..... 3 Cr .
An introduction to the basic principles of administrative organization and management in government.Study Abroad Field Research3 Cr .
Students participating in Valparaiso University-sponsored study abroad programs can receive additional credit bydoing research and writing a paper utilizing the resources available in the areas where they are located. Allresearch must be approved in advance by the chair of the department.Prerequisite: POLS 120 or consent of the chair of the department.
POLS 361/561 Public Policy ..... 3 Cr .An introduction to the study of the public policy processes, focusing on the politics and science of policyformulation, execution, and evaluation. Prerequisite: POLS 120 or consent of the chair of the department.
POLS 371/571 Constitutional Law I ..... 3 Cr .
This course focuses on the analysis of Supreme Court decisions relating to judicial review, the power of nationaland state governments, federalism, the separation of powers, Presidential and Congressional power, and relatedtopics. Prerequisite: POLS 120 and POLS 271, or consent of the instructor.
POLS 372/572 Constitutional Law II ..... 3 Cr .This course focuses on the analysis of Supreme Court decisions relating to the Bill of Rights, equal protection, dueprocess, and related topics. Prerequisite: POLS 120 and POLS 271, or consent of the instructor.
POLS 381 Cooperative Education in Political Science I ..... $0.5-3 \mathrm{Cr}$.Professional work experience which clearly augments the student's classroom education. Written reportrequired. Prerequisites: POLS 120 and approval of the chair of the department.
POLS 382 Cooperative Education in Political Science II ..... $0.5-3 \mathrm{Cr}$.Continuation of POLS 381. Prerequisites: POLS 381 and approval of the chair of the department. S/U grade.
POLS 383 Cooperative Education in Political Science III ..... $0.5-3 \mathrm{Cr}$.Continuation of POLS 381. Prerequisites: POLS 381 and approval of the chair of the department. S/U grade. Maybe repeated beyond 383 for additional credit.
POLS 386 Internship in Political Science ..... 1-7 Cr.
Opportunities for students to have direct, supervised experience in governmental agencies, political parties, andother political organizations at the national, state, and local levels. Some internships are in conjunction with offcampus programs such as the Washington semester. May be used to fulfill either an International Relationsrequirement or a Comparative requirement, when topics are appropriate. May be repeated for credit to amaximum of 7 credit hours. Prerequisite: POLS 130, POLS 150, and consent of the department chair.

## POLS 390/590 Advanced Topics in Political Science I

3 Cr .
An intensive study of topics in the process, policies, and functions of political science (e.g., political parties, political psychology, etc.). May be repeated for credit if topics differ. Prerequisite: POLS 120 or consent of the chair of the department.

## POLS 391/591 Advanced Topics in International Relations I

3 Cr .
An intensive study of topics in the process, policies, and functions of international relations or comparative political science (e.g., comparative political parties, political institutions, etc.). May be used to fulfill either an International Relations requirement or a Comparative requirement, when topics are appropriate (as determined by the department chair). Prerequisite: POLS 130 and POLS 150 or consent of the department chair. May be repeated for credit if topics are different.
This course examines how public policies in other countries differ from those in the United States. The course focuses on the policies coming from both advanced industrialized nations, such as Britain, Japan, and Sweden, as well as from developing states such as Brazil, China, India, and South Africa. Prerequisite: POLS 130 or consent of the chair of the department.
POLS 438/538 Gender and Public Policy in Global Perspective3 Cr .The purpose of this course is to introduce students to the role of gender and politics in different countriesthroughout the world. The course examines the role of women as political actors and their activities in formaland grassroots politics, and analyzes gender as a variable in public policy in different countries. Prerequisite:POLS 130 or consent of the chair of the department.
POLS 450/550 International Regimes and Global Governance ..... 3 Cr .International regimes are systems of norms and rules agreed upon by states to govern their behavior in specificpolitical contexts or issue areas. Thousands of formal and informal international regimes address issues rangingfrom arms control, trade and economic affairs, human rights, and environmental problems. This course examinesthe source, effectiveness, and the institutions designed to implement these various regimes. Prerequisite: POLS130, POLS 150, or consent of the chair of the department.
POLS 454/554 International Political Economy ..... 3 Cr.
The objective of this course is to introduce students to the study of political economy, with an emphasis on therelationship between politics and economics within the context of globalization. The course draws upon conceptsand approaches from political science, economics, history, and sociology in order to offer the student a broadintroduction to current issues in political economy. Prerequisite: POLS 130, POLS 150, or consent of the chair ofthe department.
POLS 456/556 War and Conflict3 Cr .This course focuses on the forces that promote international conflict and peace. Students will discuss the ways inwhich warfare has changed across history, as well as the form it is likely to take in the future. Of particularinterest in the survey of international war will be the intersection between war and politics. Prerequisite: POLS130, POLS 150, or consent of the chair of the department.
POLS 490 Advanced Topics in Political Science II ..... 1-3 Cr.These are full- or half-semester courses covering a variety of subject areas, with subtitles and content dependenton instructor choice and student interest. They are of two types, labeled accordingly: (a) reading and discussionseminars or (b) seminars with major papers.
POLS 491

Advanced Topics in International Relations II

1-3 Cr.
An intensive study of topics in the process, policies, and functions of international relations or comparative political science (e.g., comparative political parties, political institutions, etc.). May be used to fulfill either an International Relations requirement or a Comparative requirement, when topics are appropriate (determined by department chair). May be repeated for credit if topics differ, two POLS 491 classes may be taken concurrently if topics differ. Prerequisite: POLS 130 and POLS 150 or consent of the department chair. Note: POLS 491 is offered only as part of the Lutheran College Washington Semester.
Senior Seminar in Political Science
3 Cr .
This seminar is designed to be the place where students bring their knowledge and skills as political science majors to bear on current political topics in preparation for future service to society and active participation as citizens in a democracy.
POLS 495

Independent Study in Political Science

1-4 Cr.
Individual research on a specific problem in one of the fields of government under the supervision of a member of the departmental staff. A written report is required. Prerequisites: junior or senior standing and consent of the chair of the department.

| POLS 497 | Honors Work in Political Science <br> See Honors Work, page 63. | 3 Cr. |
| :--- | :--- | :--- |
| POLS 498 | Honors Candidacy in Political Science <br> See Honors Work, page 63. | 3 Cr. |
|  |  |  |

## Psychology

Learn more about the Department of Psychology at Valpo online.

## Professors Carlson, Nelson, Rowland, Winquist; Associate Professors Morrill-Richards, D. Simpson, Vernon (chair); Assistant Professors Butler, Hartmann, Wetherell, Zelechoski; Lecturer Abraham.

Psychology is the scientific study of mental processes and behavior. The diversified interests of its faculty enable the department to present a comprehensive view of the field. Courses in physiological, experimental, social, industrial, developmental and clinical-counseling psychology are offered. Opportunities for laboratory research in psychology and applications through field experiences are available.

A major in psychology may lead to careers in such fields as psychological counseling, recreational therapy, employment counseling, rehabilitation therapy, test consulting, demography, personnel, managing, marketing, behavior therapy, psychological research and teaching. In addition, psychology can be an excellent preparation for career in medicine and allied health professions when combined with appropriate courses in other sciences such as biology, chemistry, and physics.

## Student Organizations

Psi Chi, the national honor society, was installed at Valparaiso University in 1990. Psychology majors and minors who have completed at least nine credit hours in psychology and at least three semesters of undergraduate study, and who have demonstrated superior scholastic achievement may be selected for membership.

Students interested in participating in social activities with the psychology students and faculty are invited to join the Psychology Club.

| PSY 102 | Introductory Professional Development in Psychology | 1.5 Cr . |
| :---: | :---: | :---: |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| PSY 202 | Research Methods in Psychology | 3 Cr . |
| PSY 302 | Advanced Professional Development in Psychology | 1.5 Cr . |
| PSY 493 | Senior Seminar | 0 Cr . |
| Experimental Psychology |  |  |
| One course from the following options: |  |  |
| PSY 245 | Physiological Psychology | 3 Cr. |
| PSY 250 | Principles and Applications of Learning | 3 Cr . |
| PSY 345 | Sensation and Perception | 3 Cr . |
| PSY 350 | Human Cognition | 3 Cr. |
| PSY 355 | Environmental Psychology | 3 Cr . |
| PSY 375 | Human Neuropsychology | 3 Cr . |
| Personality/Social Psychology |  |  |
| One course from the following options: |  |  |
| PSY 215 | Life Span Development | 3 Cr . |
| PSY 225 | Social Psychology | 3 Cr . |
| PSY 330 | Child and Adolescent Development | 3 Cr . |
| PSY 332 | Psychology of Adulthood and Aging | 3 Cr . |
| PSY 335 | Psychology of Personality | 3 Cr . |


| Clinical/Applied Psychology |  |
| :---: | :--- |
| One course from the following options: |  |
| PSY 235 | Abnormal Psychology |
| PSY 260 | Psychotherapy and Counseling |
| PSY 270 | Introduction to Industrial/Organizational Psychology |
| PSY 445 | Community and Health Psychology |
| PSY 465 | Psychology and Law |
| PSY 470 | Testing and Measurement |


| Experimental Course with Laboratory |  |  |
| :---: | :---: | :---: |
| One course with laboratory from the following options: |  |  |
| PSY 245/ | Physiological Psychology | 3 Cr . |
| PSY 246 | Laboratory in Physiological Psychology | 0+2.5, 1 Cr . |
| PSY 250/ | Principles and Applications of Learning | 3 Cr . |
| PSY 251 | Laboratory in Principles and Applications of Learning | 0+2.5, 1 Cr . |
| PSY 345/ | Sensation and Perception | 3 Cr . |
| PSY 346 | Laboratory in Sensation and Perception | 0+2.5, 1 Cr . |
| PSY 350/ | Human Cognition | 3 Cr . |
| PSY 351 | Laboratory in Human Cognition | 0+2.5, 1 Cr . |
| PSY 355/ | Environmental Psychology | 3 Cr . |
| PSY 356 | Laboratory in Environmental Psychology | 0+2.5, 1 Cr . |
| PSY 370 | Laboratory in Experimental Design \& Analysis | 3 Cr . |
| PSY 375/ | Human Neuropsychology | 3 Cr . |
| PSY 376 | Laboratory in Human Neuropsychology | 0+2.5, 1 Cr . |
| Capstone Experience (recommended) |  |  |
| One course from the following options: |  |  |
| PSY 360 | History and Systems of Psychology | 3 Cr . |
| PSY 486 | Psychology Internship: Field Experience | 1-3 Cr. |
| PSY 495 | Independent Study in Psychology | 1-3 Cr. |
| PSY 496 | Independent Research in Psychology | 1-3 Cr. |
| PSY 499 | Psychology Colloquium | 1 Cr . |
| Required Additional Major/Minor |  |  |
| One from the following options: |  |  |
| A minimum of 40 Psychology credits (maximum 60 credits) |  |  |
| A second major |  |  |
| A minor |  |  |
| Bachelor of Science - Psychology Major (Minimum 32 Cr .) |  |  |
| PSY 102 | Introductory Professional Development in Psychology | 1.5 Cr . |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| PSY 202 | Research Methods in Psychology | 3 Cr . |
| PSY 302 | Advanced Professional Development in Psychology | 1.5 Cr. |
| PSY 493 | Senior Seminar | 0 Cr . |
| Experimental Psychology with Laboratory |  |  |
| Two courses with laboratory from the following options: |  |  |
| PSY 245/ | Physiological Psychology | 3 Cr . |
| PSY 246 | Laboratory in Physiological Psychology | 0+2.5, 1 Cr . |
| PSY 250/ | Principles and Applications of Learning | 3 Cr . |
| PSY 251 | Laboratory in Principles and Applications of Learning | 0+2.5, 1 Cr . |
| PSY 345/ | Sensation and Perception | 3 Cr . |
| PSY 346 | Laboratory in Sensation and Perception | 0+2.5, 1 Cr . |
| PSY 350/ | Human Cognition | 3 Cr . |
| PSY 351 | Laboratory in Human Cognition | 0+2.5, 1 Cr . |
| PSY 355/ | Environmental Psychology | 3 Cr . |
| PSY 356 | Laboratory in Environmental Psychology | 0+2.5, 1 Cr . |
| PSY 370 | Laboratory in Experimental Design \& Analysis | 3 Cr . |
| PSY 375/ | Human Neuropsychology | 3 Cr . |
| PSY 376 | Laboratory in Human Neuropsychology | 0+2.5, 1 Cr . |


| Personality/Social Psychology |  |  |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| PSY 215 | Life Span Development | 3 Cr . |
| PSY 225 | Social Psychology | 3 Cr . |
| PSY 330 | Child and Adolescent Development | 3 Cr . |
| PSY 332 | Psychology of Adulthood and Aging | 3 Cr . |
| PSY 335 | Psychology of Personality | 3 Cr . |
| Clinical/Applied Psychology |  |  |
| One course from the following options: |  |  |
| PSY 235 | Abnormal Psychology | 3 Cr . |
| PSY 260 | Psychotherapy and Counseling | 3 Cr . |
| PSY 270 | Introduction to Industrial/Organizational Psychology | 3 Cr . |
| PSY 445 | Community and Health Psychology | 3 Cr . |
| PSY 465 | Psychology and Law | 3 Cr . |
| PSY 470 | Testing and Measurement | 3 Cr . |
| Additional Required Courses |  |  |
| BIO 151 (or higher) | Human Anatomy and Physiology I | $3+3,4 \mathrm{Cr}$. |
| MATH 122 (or higher) | Applied Calculus | 4 Cr . |
| Capstone Experience (recommended) |  |  |
| One course from the following options: |  |  |
| PSY 360 | History and Systems of Psychology | 3 Cr . |
| PSY 486 | Psychology Internship: Field Experience | 1-3 Cr. |
| PSY 495 | Independent Study in Psychology | $1-3 \mathrm{Cr}$. |
| PSY 496 | Independent Research in Psychology | 1-3 Cr. |
| PSY 499 | Psychology Colloquium | 1 Cr . |
| Required Additional Major/Minor |  |  |
| One from the following options: |  |  |
| A non-science second major |  |  |
| Fundamentals of Business Minor |  |  |
| A science minor (biology, chemistry, mathematics, or physics) |  |  |
| Bachelor of Science - Psychology Major (Minimum 27 Cr .) |  |  |
| PSY 102 | Introductory Professional Development in Psychology | 1.5 Cr . |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| PSY 202 | Research Methods in Psychology | 3 Cr . |
| PSY 302 | Advanced Professional Development in Psychology | 1.5 Cr . |
| PSY 493 | Senior Seminar | 0 Cr . |
| Experimental Psychology with Laboratory |  |  |
| Two courses with laboratory from the following options: |  |  |
| PSY 245/ | Physiological Psychology | 3 Cr . |
| PSY 246 | Laboratory in Physiological Psychology | 0+2.5, 1 Cr . |
| PSY 250/ | Principles and Applications of Learning | 3 Cr . |
| PSY 251 | Laboratory in Principles and Applications of Learning | 0+2.5, 1 Cr . |
| PSY 345/ | Sensation and Perception | 3 Cr . |
| PSY 346 | Laboratory in Sensation and Perception | 0+2.5, 1 Cr . |
| PSY 350/ | Human Cognition | 3 Cr . |
| PSY 351 | Laboratory in Human Cognition | 0+2.5, 1 Cr . |
| PSY 355/ | Environmental Psychology | 3 Cr . |
| PSY 356 | Laboratory in Environmental Psychology | 0+2.5, 1 Cr . |
| PSY 370 | Laboratory in Experimental Design \& Analysis | 3 Cr . |
| PSY 375/ | Human Neuropsychology | 3 Cr . |
| PSY 376 | Laboratory in Human Neuropsychology | 0+2.5, 1 Cr . |


| Personality/Social Psychology |  |  |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| PSY 215 | Life Span Development | 3 Cr . |
| PSY 225 | Social Psychology | 3 Cr . |
| PSY 330 | Child and Adolescent Development | 3 Cr . |
| PSY 332 | Psychology of Adulthood and Aging | 3 Cr . |
| PSY 335 | Psychology of Personality | 3 Cr . |
| Clinical/Applied Psychology |  |  |
| One course from the following options: |  |  |
| PSY 235 | Abnormal Psychology | 3 Cr . |
| PSY 260 | Psychotherapy and Counseling | 3 Cr . |
| PSY 270 | Introduction to Industrial/Organizational Psychology | 3 Cr . |
| PSY 445 | Community and Health Psychology | 3 Cr . |
| PSY 465 | Psychology and Law | 3 Cr . |
| PSY 470 | Testing and Measurement | 3 Cr . |
| Additional Required Courses |  |  |
| BIO 151 (or higher) | Human Anatomy and Physiology I | $3+3,4 \mathrm{Cr}$. |
| MATH 122 (or higher) | Applied Calculus | 4 Cr . |
| Capstone Experience (recommended) |  |  |
| One course from the following options: |  |  |
| PSY 360 | History and Systems of Psychology | 3 Cr . |
| PSY 486 | Psychology Internship: Field Experience | 1-3 Cr. |
| PSY 495 | Independent Study in Psychology | 1-3 Cr. |
| PSY 496 | Independent Research in Psychology | 1-3 Cr. |
| PSY 499 | Psychology Colloquium | 1 Cr . |
| Required Additional Major |  |  |
| A science second major (biology, chemistry, mathematics, or physics) |  |  |
| Bachelor of Science - Psychology Major (Minimum 40 Cr ) |  |  |
| PSY 102 | Introductory Professional Development in Psychology | 1.5 Cr. |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| PSY 202 | Research Methods in Psychology | 3 Cr . |
| PSY 302 | Advanced Professional Development in Psychology | 1.5 Cr . |
| PSY 493 | Senior Seminar | 0 Cr . |
| Experimental Psychology with Laboratory |  |  |
| Two courses with laboratory from the following options: |  |  |
| PSY 245/ | Physiological Psychology | 3 Cr . |
| PSY 246 | Laboratory in Physiological Psychology | 0+2.5, 1 Cr . |
| PSY 250/ | Principles and Applications of Learning | 3 Cr . |
| PSY 251 | Laboratory in Principles and Applications of Learning | 0+2.5, 1 Cr . |
| PSY 345/ | Sensation and Perception | 3 Cr . |
| PSY 346 | Laboratory in Sensation and Perception | $0+2.5,1 \mathrm{Cr} .$ |
| PSY 350/ | Human Cognition | 3 Cr . |
| PSY 351 | Laboratory in Human Cognition | 0+2.5, 1 Cr . |
| PSY 355/ | Environmental Psychology | 3 Cr . |
| PSY 356 | Laboratory in Environmental Psychology | 0+2.5, 1 Cr . |
| PSY 370 | Laboratory in Experimental Design \& Analysis | 3 Cr . |
| PSY 375/ | Human Neuropsychology | 3 Cr . |
| PSY 376 | Laboratory in Human Neuropsychology | 0+2.5, 1 Cr . |
| Personality/Social Psychology |  |  |
| One course from the following options: |  |  |
| PSY 215 | Life Span Development | 3 Cr . |
| PSY 225 | Social Psychology | 3 Cr . |
| PSY 330 | Child and Adolescent Development | 3 Cr . |
| PSY 332 | Psychology of Adulthood and Aging | 3 Cr . |


| PSY 335 | Psychology of Personality | 3 Cr . |
| :---: | :---: | :---: |
| Clinical/Applied Psychology |  |  |
| One course from the following options: |  |  |
| PSY 235 | Abnormal Psychology | 3 Cr . |
| PSY 260 | Psychotherapy and Counseling | 3 Cr . |
| PSY 270 | Introduction to Industrial/Organizational Psychology | 3 Cr . |
| PSY 445 | Community and Health Psychology | 3 Cr . |
| PSY 465 | Psychology and Law | 3 Cr . |
| PSY 470 | Testing and Measurement | 3 Cr . |
| Additional Required Courses |  |  |
| BIO 151 (or higher) | Human Anatomy and Physiology I | 3+3, 4 Cr . |
| MATH 122 (or higher) | Applied Calculus | 4 Cr . |
| Capstone Experience (recommended) |  |  |
| One course from the following options: |  |  |
| PSY 360 | History and Systems of Psychology | 3 Cr . |
| PSY 486 | Psychology Internship: Field Experience | 1-3 Cr. |
| PSY 495 | Independent Study in Psychology | 1-3 Cr. |
| PSY 496 | Independent Research in Psychology | 1-3 Cr. |
| PSY 499 | Psychology Colloquium | 1 Cr . |

## Note: No more than 60 Psychology credits will count toward the minimum total

 credits required for a degree.Special Topics in Psychology (PSY 390) may be used to fulfill requirements for either degree with the consent of the chair of the department.

## Psychology Minor (Minimum 15 Cr.)

| PSY 110 | General Psychology | 3 Cr . |
| :---: | :---: | :---: |
| PSY 111 | Laboratory in General Experimental Psychology (optional) | 0+2.5, 1 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| One course from the following options (with or without a laboratory): |  |  |
| PSY 245 | Physiological Psychology | 3 Cr . |
| PSY 250 | Principles and Applications of Learning | 3 Cr . |
| PSY 345 | Sensation and Perception | 3 Cr . |
| PSY 350 | Human Cognition | 3 Cr . |
| PSY 355 | Environmental Psychology | 3 Cr . |
| PSY 370 | Laboratory in Experimental Design and Analysis | 3 Cr . |
| PSY 375 | Human Neuropsychology | 3 Cr . |

## Secondary Education Psychology Major (Minimum 46 Cr.)

| Psychology Courses |  |  |
| :---: | :---: | :---: |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| PSY 202 | Research Methods in Psychology | 3 Cr . |
| PSY 225 | Social Psychology | 3 Cr . |
| PSY 235 | Abnormal Psychology | 3 Cr . |
| PSY 250 | Principles and Applications of Learning | 3 Cr . |
| PSY 251 | Laboratory in Principles and Applications of Learning | 0+2.5, 1 Cr . |
| PSY 330 | Child and Adolescent Development | 3 Cr . |
| PSY 350 | Human Cognition | 3 Cr . |
| PSY 470 | Testing and Measurement | 3 Cr . |
| Additional Required Courses |  |  |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| GEO 102 | Globalization and Development | 3 Cr . |
| GEO 280 | Geography of Cyberspace | 3 Cr . |
| HIST 110 | The World in the Twentieth Century | 3 Cr . |
| POLS 120 | The Government of the United States | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |

## Credit by Examination

Credit for PSY 110 may be earned through the College Level Examination Program subject examination in Introductory Psychology.

## Approval of Schedules

All students taking a major or minor in psychology must have their schedules approved by the chair of the department or their assigned departmental advisor.

## Psychology Courses

## PSY 102 Introductory Professional Development in Psychology 1.5 Cr

This course exposes students to the variety of options and careers that people with an undergraduate degree in psychology may pursue. Topics include professional skill development, academic preparation for various professional paths, the process for applying to graduate school, and specific ways to maximize the student's experience as a psychology major. S/U grade only.

## PSY 103 Mentored Research in Psychology 1 Cr

Students will work with advanced Psychology major mentors on an independent research project. Mentors and mentees will work together to design a study, collect data, conduct statistical analyses, and prepare a poster summarizing the work. Mentees will meet with their mentors weekly. Prerequisites: freshman/sophomore standing and may not have taken PSY 202.

## PSY 110 <br> General Psychology

An introduction to the field of psychology with strong emphasis upon the scientific study of behavior. Topics include nervous system functioning, sensation and perception, learning, memory, cognition, development, motivation, emotion, social behavior, psychological dysfunction, and treatment. When taken concurrently with laboratory (PSY 111), may be used to fulfill the Natural Science component of the General Education Requirements.

Laboratory in General Experimental Psychology
0+2.5, 1 Cr. Laboratory to be taken concurrently with PSY 110. Students study psychological phenomena and methods directly through various laboratory experiments. When taken with PSY 110, fulfills Natural Science component of the General Education Requirements. Prerequisite: PSY 110 (may be taken concurrently).

PSY 201 Statistical Methods 3 Cr .
An introduction to the fundamentals of descriptive and inferential statistics for the behavioral sciences. May be used to fulfill the Quantitative Analysis component of the General Education Requirements. Prerequisite: MATH 110 (or placement higher than MATH 110 on the math placement exam).

Research Methods in Psychology
3 Cr .
The basic principles and methods of research in psychology focusing on the experimental method and the skills necessary to design, carry out, interpret, and write up a research project. Prerequisite: PSY 201.

PSY 215 Life Span Development 3 Cr .
An exploration of the biological, cognitive, and psychosocial changes that occur across the human lifespan. Students taking this course may not also receive credit for PSY 330 and/or PSY 332. Prerequisite: PSY 110.

Social Psychology
An interdisciplinary approach to the study of social influences on the psychological functioning and behavior of the individual. Prerequisite: PSY 110.

Abnormal Psychology
An analysis of psychopathology within the framework of theory and research. Prerequisite: PSY 110.
PSY 245 Physiological Psychology 3 Cr .
A study of the structure and function of the nervous system in relation to motivation, emotion, and cognitive function. Prerequisite: PSY 110.

Child and Adolescent Development
3 Cr .
Study of the maturational, cognitive, social, and behavioral changes associated with the development of the child through adolescence. Students taking this course may not also receive credit for PSY 215. Prerequisite: PSY 110.

Psychology of Adulthood and Aging
3 Cr.
Examination of adult development from the end of adolescence to old age from a psychological perspective. Students taking this course may not also receive credit for PSY 215. Prerequisite: PSY 110.

## PSY 335/COUN 535 Psychology of Personality

3 Cr .
An introduction to various theories of personality, with emphasis on their implications for current psychological applications and research. Prerequisite: PSY 110.

Sensation and Perception
3 Cr .
An introduction to the study of sensory and perceptual processes and the physiological mechanisms that underlie them. Prerequisite: PSY 110.
Laboratory in Sensation and Perception
$0+2.5,1 \mathrm{Cr}$.
Optional laboratory to be taken in conjunction with PSY 345. Prerequisite: PSY 201 and PSY 202 or consent of the instructor.

Human Cognition
3 Cr .
The study of various aspects of human learning, memory, and thought, such as perception, attention, development of expertise, problem-solving, reasoning, and language. Prerequisite: PSY 110.

## Laboratory in Human Cognition

$0+2.5,1 \mathrm{Cr}$.
Laboratory to be taken in conjunction with PSY 350. Prerequisite: PSY 201 and PSY 202 or consent of the instructor.

## Environmental Psychology

The study of interrelationships between the physical environment and human behavior, including environmental perception, psychological effects of pollution, personal space, crowding, urbanization, architectural design, and energy consumption. Prerequisite: PSY 110.

Laboratory in Environmental Psychology
0+2.5, 1 Cr Optional laboratory to be taken in conjunction with PSY 355. Prerequisite: PSY 201 and PSY 202 or consent of the instructor.

History and Systems of Psychology
3 Cr .
This course is a survey of the individuals and schools of thought that have influenced and still influence psychology. The philosophical beginnings of psychology and the development of a scientific approach to studying human nature are discussed in an attempt to understand contemporary trends in the field of psychology. Prerequisite: psychology major with junior standing and 15 credits in psychology.

Psychology and Religion 2 Cr.
(Also offered as EAST 365.) A study of the similarities and differences between religious and psychological perspectives related to our understanding of the human person, including our development, health, and wellness. Psychological theory and research are discussed, and original source religious texts are studied from a psychological perspective in accompanying discussion sessions. Prerequisite: PSY 110. Corequisite: PSY 366 or PSY 367.

## Christian Perspectives on Psychology and Religion <br> 1 Cr.

A study of the similarities and differences between Christian and modern psychological understandings of the human person through study and discussion of original source Christian religious texts. The discussion is designed as a complement to material presented in PSY 365. Prerequisite: PSY 110. Corequisite: PSY 365.

Buddhist Perspectives on Psychology and Religion
(Also offered as EAST 367.) A study of the similarities and differences between Buddhist and modern psychological understandings of the human person through study and discussion of original source Buddhist religious texts. The discussion is designed as a complement to material presented in PSY 365. Prerequisite: PSY 110. Corequisite: PSY 365.

Laboratory in Experimental Design and Analysis
3 Cr .
Advanced study of the methodological and quantitative concepts introduced in PSY 201 and PSY 202 with an emphasis on applications of complex designs. This course may be taken to fulfill the experimental psychology course requirement. Prerequisites: PSY 201 and PSY 202.

Human Neuropsychology
An introduction to the structure and function of the human brain, and the effects of various neurological disorders on cognition, emotion, behavior, learning, and other important aspects of the human person. Prerequisite: PSY 110 and sophomore standing, or consent of the instructor.

Laboratory in Human Neuropsychology
0+2.5, 1 Cr.
Optional laboratory to be taken in conjunction with PSY 375. Prerequisite: PSY 201 and PSY 202 or consent of the instructor.

## PSY 380

## PSY 390/590

## PSY 445/COUN 545

## PSY 465/565

## PSY 470/COUN 570

## PSY 486

PSY 493

PSY 495

PSY 496

PSY 498

PSY 499

Community and Health Psychology
3 Cr .
An introduction to the theories and practice of both community psychology and health psychology with an emphasis on the relationship and synthesis of these two disciplines as well as their unique differences. Prerequisite: PSY 110 and junior standing.
Inside-Out Prison Exchange: Rethinking Crime, Justice, and Behavior
3 Cr .
(Also offered as SOC 380.) This Inside-Out Prison Exchange course brings together students from Valparaiso University and residents of a local correctional facility to engage in meaningful dialogue about crime, justice, the criminal justice system, imprisonment, and human behavior. It is an opportunity for all participants to gain a deeper understanding of these topics from both theoretical and practical perspectives. "Inside" and "outside" students will work together, share ideas and perceptions, and learn from one another over the course of the semester. The course is limited to juniors and seniors, and to Sociology and Psychology majors. Inclusion in the course requires completion of an application and interview, and consent of the instructors. Normally offered each spring.

Special Topics in Psychology 1-3 Cr.
Selected topics based on the special interest areas of students and faculty. Recent topics have included cross-cultural psychology, psychology of women, industrial psychology, psychology of religion, and altered states of consciousness. Topics and descriptions are announced in advance. Prerequisite: PSY 110.

Psychology and Law
3 Cr .
The application of psychological knowledge to the legal system. Topics will include eyewitness testimony, jury decision-making, the insanity defense, jury selection, and lie detection. Prerequisite: PSY 110 and junior standing.

Testing and Measurement
3 Cr .
Principles and methods of psychological measurement and evaluation with application to specific testing situations. Course intensification option: 1 Cr. Prerequisite: PSY 201 and junior standing.

Psychology Internship: Field Experience
1-3 Cr.
Emphasis on, but not limited to, functions of social-service and mental-health agencies. Each student spends 4-10 hours each week in supervised work activity at an agency in Northwest Indiana and two hours every other week in a classroom discussion meeting. A written report is required. Prerequisites: psychology major, consent of the instructor, and depending on the practicum site, PSY 260 or other designated courses. May be repeated for credit to a maximum of nine credit hours; only three credit hours may be applied toward a major in Psychology. S/U grade only.
Senior Seminar
0 Cr .
An integrative experience designed as a capstone for psychology majors. Prerequisite: PSY 110 and senior standing. S/U grade.

Independent Study in Psychology 1-3 Cr. Independent readings under faculty supervision on topics not covered in the standard curriculum. A written report is required. Student must submit an independent study form prior to registration. Prerequisite: major with junior/ senior standing and consent of the chair of the department. No more than six credit hours of PSY 495 and/or PSY 496 may be applied to Psychology major requirements.

Independent Research in Psychology
$1-3 \mathrm{Cr}$.
Individual research projects under faculty supervision involving the design of the project, data collection, and analysis. A written report is required. Prerequisites: Psychology major with junior/senior standing, a 3.00 grade point average, PSY 201 and PSY 202, and consent of the chair of the department. No more than six credit hours of PSY 495 and/or PSY 496 may be applied to Psychology major requirements.

Honors Candidacy in Psychology
3 Cr.
See Honors Work, page 63.
Psychology Colloquium
Faculty and student presentations of research projects, professional interests, and current topics related to psychology. Student participation is expected. Prerequisite: junior or senior major. May be repeated once for credit. S/U grade only.

## Social Work

Learn more about the Department of Social Work at Valpo online.

## Associate Professor Ringenberg (chair); Assistant Professor Barden; Clinical Associate Professor Crumpacker Niedner.

The Department of Social Work offers the Bachelor of Social Work (BSW) degree. As sought after human service professionals, social workers seek to promote human and community wellbeing. Guided by a person and environment construct, a global perspective, respect for human diversity, and knowledge based on scientific inquiry, social work's purpose is actualized through its quest for social and economic justice, the prevention of conditions that limit human rights, the elimination of poverty, and the enhancement of the quality of life for all persons (Council on Social Work Education, Educational Policy Accreditation Standards).

Social Work is concerned with empowering people to develop capacities and strengths that will enhance social functioning. Our BSW graduates are prepared for generalist social work practice in a wide variety of settings. Alumni of our program are highly marketable and are employed in mental health services, schools, hospitals, elder care, churches, shelters, corrections, child welfare, and other social service agencies. Our graduates often pursue the Master of Social Work (MSW) degree within five years of earning their BSW and are eligible to apply for advanced standing in many MSW programs. Advanced standing typically offers students who have earned a BSW the opportunity to complete their graduate degree in two to three semesters, rather than the typical two years.

## Accreditation

The Department of Social Work is accredited by the Council on Social Work Education (CSWE) which is recognized by the Council for Higher Education as the sole accrediting agency for baccalaureate- and masters-level social work education in the United States.

## Mission

Valparaiso University's mission as a community of learning dedicated to excellence and grounded in the Lutheran tradition of scholarship, freedom, and faith, prepares students to lead and serve in both church and society (VU Mission). Our Social Work Department mission grows out of this University mission in that we provide a rigorous and stimulating educational environment characterized by a dynamic interchange between faculty and students that promotes critical thinking, conscious use of self, and active engagement in the learning process. Our vision is to foster the creation of coherent and integrated educational learning experiences that utilize an active learner model, valuing different ways of knowing, aimed at preparing students for generalist social work practice that will:

- address the whole person in the context of their environment;
- be informed by an ecological/systems and strengths perspective;
- be actively involved in advocacy, empowerment, and social change;
- serve vulnerable and oppressed people;
- implement culturally sensitive practice strategies; and
- contribute meaningfully to society by valuing service, social and economic justice, the dignity and worth of each person, importance of human relationships, and integrity and competence in all areas of generalist practice.
As a values-based profession, it is critical that those who pursue an education and career in social work be aware of and ascribe to the core values of the profession as outlined above.


## Purpose

The purpose of the Department of Social Work is to educate and prepare students for ethical, effective, and culturally competent generalist social work practice for service in the world. The program uses a competency-based educational model and outcome performance approach to curriculum and co-curricular design to meet this purpose.

## Admission Policies and Procedures

Students who wish to major in social work must declare this intention with the University registrar and complete the departmental admissions process.

## University-Level Process

First-year students who enter the University with a declared social work major need take no further action at the University level. Students who wish to transfer from either another department or an exploratory major must complete the proper Universitylevel paperwork to declare a social work major and submit it to the Office of the Registrar no later than May 1st of their sophomore year.

Department-Level Process

Both students who enter the University with social work as a declared major and students who change majors must complete the departmental admissions process no later than September 30th of their junior year. In order to have the process completed by this date, it should be initiated as soon as possible after entering the University or declaring the social work major with the University registrar.

The departmental admissions process is fully explained in the admissions materials which must be obtained from the Department of Social Work office in 102 Heidbrink Hall. Requirements for formal admission include:

1. A strong desire to serve while promoting human and community well-being.
2. A cumulative overall University grade point average of 2.0.
3. A cumulative grade point average of 2.5 in Department of Social Work classes.
4. Completion of all essays and paperwork included in the admissions materials which must exhibit college-level writing skills. Should any piece of writing submitted with the admissions application not meet faculty expectations for quality, it will be returned to the applicant for re-writing.
5. A formal interview with a member or members of the social work faculty.

In exceptional circumstances, a student may be admitted to the department with a cumulative grade point average lower than 2.0 and/or a social work grade point average lower than 2.5 . In such circumstances, a student would be admitted to the department on conditional major status and encouraged to raise their overall grade point average to 2.0 and/or their social work department grade point average to 2.5 in order to remain a social work major.

## Academic Progression Standards

In order to remain a social work major and progress through the program, students must maintain a cumulative grade point average of 2.0 and a social work department grade point average of 2.5 . Should a student's grade point average fall below these requirements, she/he will be placed on conditional major status and will be allowed up to December of the junior year to raise the grade point average to the required standards. Failure to reach the required grade point average after this time frame on conditional major status will result in dismissal from the major.

Should a social work major earn an F in a course in the social work major, she/he will be allowed to retake the course one time in order to earn a passing grade. Failure to earn a passing grade the second time taking a course will result in dismissal from the major.

## Field Education in Social Work

Field education in social work sets our graduates apart, as this experience fosters the integration of empirical and practicebased knowledge and promotes the development of professional competence. The field component is systematically designed around program educational competencies and is supervised and evaluated according to stringent criteria established by the Council on Social Work Education. Field Education consists of educationally directed internships in a variety of community settings. In order to graduate with the Bachelor of Social Work degree, social work majors are required to successfully complete two internships- a 100 -hour internship in the spring semester of their junior year and a 450 hour internship over the entirety of their senior year. These internships are sequential and must be completed in conjunction with specific coursework.

## Junior Internship Admission \& Progression Standards

The first required field internship takes place during the spring semester of the junior year. Screening of students for admission to the field practicum begins in the fall semester of the junior year. Social work majors must meet the following criteria in order to be considered for placement in a junior internship:

1. Successful completion of the foundation-level social work curriculum which consists of: SOCW 151, 210, 220, 240, and 260.
2. Current junior standing in the University.
3. Completion of formal entry to the department (as described above).
4. Submission of Junior Field Education Application materials which are distributed by the director of Field Education no later than the fall semester of the junior year.
5. Approval of the social work faculty.

Should a social work major not meet these requirements prior to the beginning of the second semester of the junior year, she/he will not be eligible to begin the first required field placement. In such a case, the student will be counseled out of the major or must wait until the following spring semester to re-apply for the first required field practicum.

Students must meet the following standards in order to remain eligible to participate in the field education component of the social work major.

1. Academic:
a. Meet the standards for academic progression as noted above
b. Earn at least a C+ in all internship-related courses (SOCW 356, 386, 455, 456, 485, \& 486)
2. General Behavior:
a. Behavior in internships and courses conforming to the Social Work Code of Ethics
b. Adherence to the Valparaiso University Honor Code and its application as laid out in individual courses
c. Adherence to federal and state laws
3. Professionalism:
a. Demonstrate an ability to create a safe emotional environment for clients and fellow students
b. Respect clients and fellow students, in word and action, as valuable individuals
c. Seek to build on client and classmate strengths
d. Seek to learn client and classmates' vantage points and language used to described related issues
e. Learn and adhere to basic classroom and workplace expectations
f. Resolve differences with clients, agency colleagues, classmates, and faculty assertively and professionally

Failure to meet these expectations will require either corrective action, dismissal from the field internship, or dismissal from the program, depending upon the nature of the problem.

## Senior Internship Admission \& Progression Standards

The second required field practicum is completed during both fall and spring semesters of the senior year. In order to be eligible for the senior-level practicum, social work majors must demonstrate the following:

1. Successful completion of all required classes
2. Satisfactory evaluation of junior field internship
3. Completion of the Senior Field Education Application which is distributed by the director of Field Education during the spring semester of the junior year
In order to be eligible to remain in the senior-level internship, social work majors must maintain the academic, behavioral, and professional standards outlined above.

## Double Major with Social Work

Because students graduate from the Department of Social Work with a Bachelor of Social Work (BSW) degree, students wishing to have a major in addition to social work must declare social work as their first major. Those who desire to enhance their learning by pursuing co-curricular plans of a double major or minor are encouraged to do so.

## Study Abroad

Faculty support students in participating in off-campus study abroad. Additionally, many of our majors have benefitted from the Chicago Urban Studies experience. Students making this plan of action as a means to enhance the educational experience and broaden one's worldview should do so in the fall semester of their junior year, or sooner.

## Graduation

To be eligible for the Bachelor of Social Work degree, a student must complete the prescribed curricula found on the following pages. The student must also meet the academic, behavioral, and professional standards stated above and all additional requirements for graduation established by the University.

## Student Organization \& Honor Society

The Department of Social Work has a Student Social Work Organization (SSWO), as well as an established chapter of the Phi Alpha National Social Work Honor Society. SSWO provides students with the opportunity to lead and serve around their interests within the department and on campus. Additionally, as an organization, it represents the voice of the students in formulating and modifying departmental level policies affecting academic and student affairs within the program. The lota Lambda chapter of Phi Alpha at Valparaiso recognizes students who have achieved a 3.25 grade point average in the social work major and a 3.00 grade point average for all required coursework for the Bachelor of Social Work degree. Potential members are identified as those who exemplify the characteristics of consummate social work professionals involved in the University and community.

## Student Fees

Upon entry into the program, in order to support learning pertaining to the competency-based curriculum, all majors are expected to participate in several on and off-campus co-curricular educational events. These hallmark opportunities require collection of an annual fee from each student which is based on a student's year in school and the experiences in which each student will partake for that upcoming year. These comprehensive fees cover costs pertaining to field education and required classroom activities and co-curricular events. Currently, these fees are set at $\$ 350$ each year for juniors and seniors, and $\$ 90$ each year for sophomores and first-year students.

| Bachelor of Social Work - Social Work Major (Minimum 45 Cr ( $)$ |  |  |
| :---: | :---: | :---: |
| SOCW 151 | Introduction to the Profession of Social Work | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| SOCW 220 | Human Behavior and Social Environment | 3 Cr . |
| SOCW 240 | Communication and Counseling Skills | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights \& Justice | 3 Cr . |
| SOCW 356 | Professional Intervention and Human Services | 3 Cr . |
| SOCW 365 | Introduction to Methods of Social Research | 4 Cr . |
| SOCW 386 | Junior Integrative Seminar and Field Experience | 2 Cr . |
| SOCW 410 | Analysis of Social Policy | 3 Cr . |
| SOCW 455 | Social Work Practice I | 3 Cr . |
| SOCW 456 | Social Work Practice II | 3 Cr . |
| SOCW 485 | Integrative Seminar I | 3+3, 6 Cr . |
| SOCW 486 | Integrative Seminar II | 2+3, 5 Cr . |
| SOCW 493 | Event Leadership and Organizing for Communities | 1 Cr . |
| Additional Required Courses |  |  |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| SOC 110 | Introduction to Sociology | 3 Cr . |
| One 3 credit Political Science course |  |  |
| One course from the following options: |  |  |
| ECON 136 | The Economics of Health, Education, and Welfare | 3 Cr . |
| ECON 221 | Principles of Microeconomics | 3 Cr . |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| GEO 201 | Economic Geography | 3 Cr . |
| GEO 320 | Urban Geography | 3 Cr . |

## Social Work Minor (Minimum 15 Cr.)

Fifteen credits from the following options:
SOCW 151 Introduction to the Profession of Social Work 3 Cr .
SOCW 210 Social Welfare: Policy and Services 3 Cr.
SOCW 220 Human Behavior and Social Environment 3 Cr.
SOCW 240 Communication and Counseling Skills 3 Cr.
SOCW 260 Diverse Populations: Human Rights \& Justice 3 Cr.
SOCW 290 Social Work Colloquium 2-3 Cr.
SOCW 393 Advanced Seminar in Social Work 1-3 Cr.
Note: SOCW 365 or SOCW 410 may be substituted for other courses with permission of the chair of the department.

## Social Work Courses

## SOCW 151 Introduction to the Profession of Social Work

This course introduces students to social work, one of the most dynamic and diverse professions in the public service arena. From a beginning look at its historical roots, to the wide variety of practice arenas, students will gain a preliminary understanding of foundational theory and conceptual materials required for effective generalist practice and essential skills necessary to develop professional and personal success. The course is intended for social work majors, minors, exploratory students, and those considering a double major or work in the human service field. Twenty-five hours of out-of-class self-directed learning experiences are required. Fifteen to twenty of the twenty-five hours will be community volunteering.

The objectives of this course are historical overviews of the economic, social, and political forces that shape the social welfare structure. Descriptive analyses of current social welfare programs, public and private, are examined. Professional values and ethics undergird the content that further examines macrosystem matters affecting human diversity and social justice. This course offers activities in and out of the classroom that are designed to help students see the relevance of social policy. May be used to fulfill the Social Science component of the General Education Requirements.

## Human Behavior and Social Environment

3 Cr .
A study of bio-psycho-social and cultural variables that affect human development and behavior. General systems theory is used as a theoretical foundation. Various other theoretical frameworks are examined as they apply to different social groups (friendship, family, organization, community). General systems theory is intentionally integrated throughout the course content. Gender, race, sexual orientation, and social class issues related to human development and interaction are analyzed. May be used to fulfill the Social Science component of the General Education Requirements.

Communication and Counseling Skills
This course is a unique experiential and introductory interviewing course where students critically examine and learn about foundational theory for communication and counseling skills. Additionally, they learn elements of basic counseling theory, the overarching helping process in a multicultural context, and then apply theoretical frameworks in videotaped and cross cultural exchanges. Built on social work systems theory and the strengths perspectives, students gain experience in applying theory and skills with sensitivity to work with people from diverse backgrounds. The aim is for students to develop beginning level intentional competence as communicators, interviewers, and change agents with client systems.

## SOCW 250 Family in Society

3 Cr .
This course prepares beginning-level social service professionals to work effectively with families. Theoretical material on family development and family dynamics is introduced. Skills that are particularly helpful in work with families are explained. Diversity within and between families' matters is also explored. Students will assess families and practice applying the skills and concepts discussed in class through role plays. Prerequisite: SOCW 240.

This course introduces students to some of the diversity factors by which people self-define or are defined by others. Students will learn social work theories and practices relevant to understanding human diversity and how it is sometimes used as an excuse for oppression, as well as strategies to address human rights and social justice issues involved in such situations. Prerequisite: junior/senior status. May be used to fulfill either the Cultural Diversity course component or to partially fulfill the Social Science component of the General Education Requirements, but not both.

Social Work Colloquium
A study of selected topics reflective of contemporary concerns for the social worker, such as adulthood, women, clinical methods and techniques for helping professions, housing, ethics, substance abuse, juvenile delinquency, and poverty. Listings are announced. Prerequisite: junior standing or consent of the chair of the department.

An integrated learning, practice course, which introduces students to the social work planned change process and generalist intervention model. Students learn theories, concepts, and an ethical guide that provide a framework for generalist social work intervention. The Junior Level Learning Portfolio is one of several foci of this course. Prerequisites: SOCW 151, SOCW 210, SOCW 220, SOCW 240, and SOCW 260. Corequisite: SOCW 386

This course examines the application of concepts of research methodology to social work practice. All students will conduct original research and present it in both oral and poster presentations at conferences. The research content includes qualitative and quantitative research methodologies; data analysis, including statistical procedures; systematic evaluation of practice; instrument development; proposal writing and critique; biases in research methods, and reports. Prerequisite: SOCW 151, SOCW 210, SOCW 220, SOCW 240, SOCW 260, and PSY 201.

An intensive study of social welfare policy, principally in the United States, and a historical review of the contemporary forces, primarily social and economic, that have shaped their development. Students will each select a specific policy area in which to focus their research. Common policy areas chosen include social services, education, housing, income maintenance, protective services, and health care services. Prerequisites: senior standing and SOCW 151, SOCW 210, SOCW 220, SOCW 240, SOCW 260, SOCW 365, or consent of the chair of the department.

Social Work Practice I
3 Cr .
This course is the first segment of the senior theory component designed to prepare social work students to integrate theory and other classroom concepts into actual practice situations. Students continue their integration of learning pertaining to practice content that encompasses ethics, knowledge, and skills for working effectively with diverse individuals, families, groups, and agencies with particular emphasis on the micro and mezzo levels of practice. For practice evaluation purposes, students identify, analyze, and implement empirically based interventions designed to assist clients in achieving goals. Students further develop their professional social work identity, where critical thinking informs action. Prerequisites: senior standing, social work major, SOCW 356, and SOCW 386. Corequisite: SOCW 485.

Social Work Practice II
3 Cr .
This course is the continuation and final theory component for senior social work students. The primary focus is on critical thinking, professional use of self, practice, and ethical engagement needed for effective intervention, particularly at the macro level of practice. Students prepare, evaluate, and reflect on their undergraduate baccalaureate experience by compiling the Senior Level Learning Portfolio where they demonstrate growth and proficiency in the overarching program objectives. Prerequisite: SOCW 455. Corequisite: SOCW 486.

Integrative Seminar I
3+3, 6 Cr.

This course is the first segment of the senior social work practice component designed to prepare competent and effective social work students to become generalist practitioners. Students complete a concurrent educationally directed field practicum of 225 hours on Tuesdays and Thursdays in a community social service agency. Students are required to complete assignments reflecting on their interventions and observations. Prerequisites: senior standing, social work major, SOCW 356, and SOCW 386; Corequisite: SOCW 455.

## Integrative Seminar II

This course is the continuation and final professional foundation course in the practice sequence for senior social work students. The primary focus is on critical thinking, professional use of self, practice, and ethical engagement needed for effective intervention. Students complete a concurrent educationally directed field practicum of 225 hours on Tuesdays and Thursdays in a community social service agency. Students are required to complete assignments reflecting on their interventions and observations, building on the reflections in SOCW 485. Prerequisite: SOCW 485. Corequisite: SOCW 456.

Event Leadership and Organizing for Communities
1 Cr .
Seniors will be responsible to plan, implement, and evaluate multiple departmental events. Community change theories will be used to structure each stage of the process. Various social work faculty will serve as consultants in their areas of expertise. Leadership roles will be divided among the students to ensure that each student assumes a primary leadership role for one event. Prerequisites: SOCW 455 and SOCW 485. Corequisite: SOCW 486.

See Honors Work, page 63.
SOCW 498 Honors Candidacy in Social Work
3 Cr .
See Honors Work, page 63.


## Sociology and Criminology

Learn more about the Department of Sociology and Criminology at Valpo online.

## Associate Professors D. Bartusch (chair), Lavin-Loucks, Yogan; Assistant Professor Raridon; Visiting Assistant Professor Junker.

The Department of Sociology encompasses the disciplines of sociology, criminology, and anthropology, and seeks to provide a broad-based understanding of the organization and dynamics of human society and culture. Its subject matter ranges from intimate family life to the complex ways social institutions shape behavior, from crime to religion, from the divisions of social class to the shared beliefs of a common culture. Its primary focus is on social relationships and social structures in a wide variety of cultural and social settings.

The department's programs seek to help students achieve awareness of the world in which they live, and of the causes and consequences of human social behavior. Its basic objective is to help students understand themselves, the groups in which they participate, as well as the dynamics of everyday life. By expanding their knowledge of the field, its theories, concepts, and research methods, and by acquiring insights to their world from the study of different peoples and cultures, students develop skills in social analysis, enhance their capacity for self-evaluation, and grow in their ability to make informed judgments about key social issues in a multicultural society.

To achieve these objectives, the department has developed a curriculum grounded in the liberal arts tradition that is flexible and responsive to student needs. While all majors are required to enroll in a core of basic sociology courses, the curriculum provides coursework that prepares students for a range of intellectual, professional, and occupational interests. Students who major in sociology may elect to concentrate either in general sociology or criminology. The department also offers minors in both general sociology and criminology.

## Sociology Concentration

The general sociology concentration is intended for students interested in understanding society and social behavior. The sociology concentration can lead to careers in administration in a variety of community, government, and social service agencies, market research, or other vocations that require an understanding of the dynamics of human relationships in a multicultural society. The concentration also prepares students for graduate study in sociology and/or law. Students who seek careers involving agency administration should consider the Fundamentals of Business Minor (page371).

## Criminology Concentration

Students who are interested in the study of crime and criminal behavior are encouraged to concentrate in criminology. This concentration encourages students to think critically about crime, law, and justice. Students will complete coursework in subjects such as juvenile delinquency, criminological theory, policing and society, or the sociology of law. Students must complete at least one internship during their junior or senior year.

## International Honor Societies

The department encourages qualifying students to join honor societies in sociology and the social sciences. Such organizations recognize outstanding scholarship and achievement. There are two international honor societies for which majors in the department may qualify. First, the department sponsors the NU Chapter of the international honor society in sociology, Alpha Kappa Delta. Second, the department, along with other social science disciplines at Valparaiso University, supports Pi Gamma Mu, the international honor society in social science.

| Bachelor of Arts - General Sociology Major (Minimum 33 Cr .) |  |  |
| :---: | :---: | :---: |
| Common Core |  | 15 Cr . |
| SOC 110 | Introduction to Sociology | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOC 310 | Development of Sociological Theory | 3 Cr . |
| SOC 320 | Research Methods in Sociology | 3 Cr . |
| SOC 493 | Senior Seminar | 3 Cr . |
| Sociology Concentration |  | 15 Cr . |
| Two additional 200-level Sociology courses |  |  |
| Two additional 300- or 400-level Sociology courses |  |  |
| One additional Sociology course at any level |  |  |
| Additional Requir | Course | 3 Cr . |
| One course from the following options: |  |  |
| PSY 201 | Statistical Methods | 3 Cr . |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |

Bachelor of Arts - Sociology Major with Criminology Concentration (Minimum 36 Cr .)

| Common Core |  | 15 Cr . |
| :---: | :---: | :---: |
| SOC 110 | Introduction to Sociology | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOC 310 | Development of Sociological Theory | 3 Cr . |
| SOC 320 | Research Methods in Sociology | 3 Cr . |
| SOC 493 | Senior Seminar | 3 Cr . |
| Criminology Concentration |  | 18 Cr . |
| SOC 130 | The Criminal Justice System | 3 Cr . |
| SOC 311 | Criminological Theory | 3 Cr . |
| SOC 386 | Internship in Sociology/Criminal Justice/Anthropology | 3 Cr . |
| One course from the following options: |  |  |
| SOC 270 | Juvenile Delinquency | 3 Cr . |
| SOC 350 | Police in Society | 3 Cr . |
| SOC 360 | Penology | 3 Cr . |
| SOC 370 | Sociology of Law | 3 Cr . |
| SOC 391 | Issues in Criminology | 3 Cr . |
| Two additional Sociology courses at 200-level or higher |  |  |
| Additional Required | Course | 3 Cr . |
| One course from the following options: |  |  |
| PSY 201 | Statistical Methods | 3 Cr . |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |

Students who plan to attend law school, or who are interested in justice agency administration, are strongly encouraged to complete degree requirements by adding an individualized minor in Justice Administration or some other individualized minor relevant to one's course of study and career plans. It is recommended that students planning an individualized minor select courses from the following options: PSY (110 or 111), and 235; MGT 304; and POLS 120, 220, 340, 341, 345, and 360. Other programs which are recommended to complete degree requirements are the Fundamentals of Business Minor (page 371) or the Chicago Urban Semester (page 68).

| Sociology Minor (Minimum 18 Cr.$)$ |  |  |
| :---: | :---: | :---: |
| SOC 110 | Introduction to Sociology | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOC 310 | Development of Sociological Theory | 3 Cr . |
| Two 200- or 300 | I Sociology courses | 6 Cr . |
| One 300- or 400 | Sociology course | 3 Cr . |
| Criminology Minor (Minimum 18 Cr.$)$ |  |  |
| SOC 130 | The Criminal Justice System | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOC 311 | Criminological Theory | 3 Cr . |
| Three courses from the following options: |  |  |
| SOC 270 | Juvenile Delinquency | 3 Cr . |
| SOC 280 | Media and Crime | 3 Cr . |
| SOC 291 | Topics in Criminology | 3 Cr . |
| SOC 350 | Police in Society | 3 Cr . |
| SOC 360 | Penology | 3 Cr . |
| SOC 370 | Sociology of Law | 3 Cr . |
| SOC 391 | Issues in Criminology | 3 Cr . |

## Credit by Examination

Credit for SOC 110 may be earned through the College Level Examination Program in Introductory Sociology.

## Plan of Study

Students pursuing a major or minor in sociology must have a plan of study approved by designated departmental advisors. Students are advised to take SOC 110, SOC 130, SOC 275, and a statistics course during their freshman or sophomore year. They should take SOC 310, SOC 311 and SOC 320 during their junior year. The internship course (SOC 386) may be taken only during students' junior or senior year. The capstone course (SOC 493) should be taken during their senior year and only after students have taken the other required sociology courses.

## General Education Requirements

Courses in sociology partially fulfill the Social Science Requirement of the General Education Requirements. Two sociology courses (SOC 210 and SOC 275) partially fulfill the Cultural Diversity Requirement of the General Education Requirements.

## Level I Courses

Level I courses are designed to give students a broad overview of sociology. These courses typically expose the student to many different sociological topics and are taught at the introductory level.

Introduction to Sociology
The analysis of the major institutions, structures, and processes of American society, as well as an introduction to the basic theoretical and methodological approaches of the discipline. Normally offered every semester.

The Criminal Justice System
3 Cr .
A survey of the operations, functions, and interactions of the police, the courts, and correction agencies; that is, formal organizations of social control. Field trips and observation of selected agencies may be scheduled. Normally offered every semester.

## Level II Courses

Level II courses focus on one broad sociological topic and provide information about fundamental concepts and theoretical approaches used within sociology. No prerequisites.
SOC 210 Contemporary Social Problems 3 Cr.

Sociological perspectives are applied to the identification, explanation, and analysis of social problems in American society and in selected world societies. Course content focuses on: 1) examining the major institutions of societythe family, economy, and polity-and how they can perpetuate social problems; and 2) examining inequalities based on class, race, and gender. Specific topics can include poverty, homelessness, racism, sexism, drug abuse, crime, juvenile delinquency, and violence. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. Normally offered during the summer.

The Family
3 Cr .
A study of the family as a basic social unit and institution, with emphasis on the various forms and functions of the family. Special consideration is given to modern influences on the interaction and organization of American family life.

Social Psychology
3 Cr.
The social-psychological study of the ways society influences the behavior of the individual. Course focuses on the theoretical approaches of symbolic interaction, social exchange, and dramaturgical analysis. Normally offered during the spring semester.

Sociology of Health and Health Care
This course examines the social sources and social distribution of illness in the United States and other countries. Other topics which are examined include aging, mental illness, bioethics, the profession of medicine, and health care institutions. University students work off-site with local residents to examine the effects of aging, stress, and other demographic characteristics on health. Normally offered every fall.

Deviance
An examination of deviant behavior with emphasis upon theories explaining how people become deviants. Surveys the forms of deviance: crime, mental illness, drug and alcohol abuse, and sexual deviation. Field trips may be scheduled. Normally offered during the fall semester.

Juvenile Delinquency
3 Cr.
A criminological course that focuses specifically on crime committed by youth, typically early through late adolescence. This course explores the nature and extent of delinquency, theory and research, and societal responses to delinquency. Normally offered every fall.

## Systems of Social Stratification

3 Cr .
This course examines four social divisions found in the United States and in other postmodern societies. The course will examine: 1) gender identity and behavior, 2) social class, 3) race and ethnicity, and 4) sexuality. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. Normally offered every semester.

## Media and Crime

This course examines the complex relationships among media, crime, and the criminal justice system. Special emphasis is placed on television news media and the pervasiveness of crime and criminological theory in Hollywood cinema. Course content includes an evaluation of how the media reports and frames crime, fundamentally influencing public perception. In addition, students will develop a sense of how the media simultaneously acts as a catalyst for, a consequence of, and a solution to the crime problem. Normally offered in the fall of even numbered years.

Hollywood Goes to High School
3 Cr.
This course examines the way in which Hollywood films that focus on high school portray individualism, social class, gender, race, and the roles of students and faculty in urban, suburban, and elite/private high schools. The course critically examines these images, as well as the reality of life and academics in U.S. high schools. The course also contrasts images of U.S. high school life with those in films from other countries. Normally offered in the fall of odd numbered years.

A survey course focusing on topics from a sociological perspective generally involving the interplay between social structure(s) and social interaction(s). The exact topic of the course may vary each time this course is offered. Topics may include: criminal investigations, sport and society, cyber communities, religion and society, high school culture and education, healthcare and/or organizational behavior. May be repeated for credit if topics are different.

SOC 291 Topics in Criminology 3 Cr .
A survey course focused on gaining understanding of topics from a criminological perspective. The exact topics addressed by the course may vary each time this course is offered. Topics may include: criminal investigations, cybercrime, comparative justice systems, interpersonal violence, white collar crime, or other central themes in criminology. May be repeated for credit if topics are different.

## Level III Courses

Level III courses are designed to provide depth of experience and understanding in narrow subject areas.

## SOC 310/510 Development of Sociological Theory <br> 3 Cr.

Study of the historical development of sociological thought and the contributions of major theorists and their understanding of society. Required of all majors and minors. Prerequisite: Grade of C- or higher in SOC 110. Normally offered every fall.
SOC 311/511 Criminological Theory 3 Cr . Study of the major sociological theories of crime. Considers how crime is defined and measured, and how society responds to criminal behavior. Required of all sociology majors with the concentration in criminology. Prerequisite: Grade of C- or higher in SOC 110 or 130 . Normally offered every spring.

SOC 315/515 Mass Media and Society
3 Cr .
This course examines the overall structure and scope of the media as a social institution. Students will explore the social factors (e.g., economics, politics, technology, law, and culture) that shape media messages and the way in which media images and meanings frame social issues and affect public discourse and individual beliefs. Topics include social inequality (based on race, ethnicity, social class, and gender), media representations, social change, and public policy, among others. Prerequisite: SOC 110 or consent of the instructor. Normally offered in the spring of odd numbered years.

SOC 320/520 Research Methods in Sociology
3 Cr .
Study of research methodologies used in both qualitative and quantitative sociological contexts. Skills are taught through small-scale projects whenever possible. Required of all majors and minors. Prerequisites: Grade of C- or higher in SOC 110 and in one statistics course (PSY 201, STAT 140, STAT 240, or IDS 205). Normally offered every spring.

SOC 325/525 Urban Sociology
3 Cr .
An examination of the city as a social system. Emphasis placed upon the historical, demographic, and ecological development of urban areas, along with an exploration of major problems confronting American cities. Development of urban life style is also examined. Normally offered in the fall of even numbered years.
SOC 340/540 Gender
3 Cr.
An introduction to how society defines and structures gender identity and behavior for males and females. The course focuses on the biological and social constructs of gender and how those are interpreted through history, language, sexuality, race, family structure, dating patterns, religion, and work environments. Prerequisite: SOC 110, SOC 275 , or consent of the instructor. Normally offered each spring of odd-numbered years.

An examination of the history, structure, and behavior of the police in American society and other selected countries/societies. Students will learn about the history of American policing, police practices, the relationship of the police system to the constitution and local and national society. Overall emphasis is on the description and analysis of the police as part of a culture's broader system of social control. Prerequisite: SOC 110, SOC 130, or consent of the instructor. Normally offered each spring of even-numbered years.

A critical social scientific examination of prisons, jails, community corrections, and paroling authorities with emphasis on both historical development and current trends. Field trips may be scheduled. Prerequisite: SOC 110, SOC 130, or consent of the instructor. Normally offered each fall of even-numbered years.

Sociology of Law
The study of the place of law in society, the relationship between law and social change, law and other social institutions. Prerequisite: SOC 110, SOC 130, or consent of the instructor. Normally offered each spring of oddnumbered years.
SOC 380 Inside-Out Prison Exchange: Rethinking Crime, Justice, and Behavior 3 Cr.
(Also offered as PSY 380.) This Inside-Out Prison Exchange course brings together students from Valparaiso University and residents of a local correctional facility to engage in meaningful dialogue about crime, justice, the criminal justice system, imprisonment, and human behavior. It is an opportunity for all participants to gain a deeper understanding of these topics from both theoretical and practical perspectives. "Inside" and "outside" students will work together, share ideas and perceptions, and learn from one another over the course of the semester. The course is limited to juniors and seniors, and to Sociology and Psychology majors. Inclusion in the course requires completion of an application and interview, and consent of the instructors. Normally offered each spring.

## SOC 386 Internship in Sociology/Criminal Justice/ Anthropology

3 Cr .
Internships are organized to provide students with some measure of "hands on" experience in their field of interest. Students are required to develop a contract with both the agency to which they are assigned and a supervising instructor outlining basic expectations. A minimum of 128 internship hours and a biweekly class are required. Students planning an internship in a spring semester must complete an application for placement with the internship coordinator by October 1. Experience and workload vary with both the field of study and the agency assignment. Required of all criminology students, recommended for all others. Prerequisites: Junior standing, consent of the internship coordinator, and grade of C- or higher in SOC 130 or SOC 110. Normally offered each spring and second summer session.

## Issues in Sociology

3 Cr.
An exploration of some of the issues debated by sociologists today. Issues may include racism, aging in America, class structures in the US, religion and the media, or other current social issues. May be repeated for credit if the issues are different. Prerequisite: SOC 110, SOC 130 or consent of the instructor.
Issues in Criminology
An exploration of some of the issues debated by criminologists today Issus may include feminist or Marxist criminology, criminal deviance, victimology, and cross-cultural comparative crime. May be repeated for credit if the issues are different. Prerequisite: SOC 110, SOC 130 or consent of the instructor.
SOC 481 Cooperative Education in Sociology/Criminal Justice/Anthropology I 1-3 Cr.
Work experience in a cooperating public or private service agency. Written reports required. Prerequisites: Junior standing and approval of the chair of the department.
SOC 482 Cooperative Education in Sociology/Criminal Justice/Anthropology II
Continuation of SOC 481. Prerequisites: SOC 481 and approval of the chair of the department.
SOC 483 Cooperative Education in Sociology/Criminal Justice/Anthropology III 1-3 Cr.
Continuation of SOC 481. Prerequisites: SOC 481 and approval of the chair of the department. May be repeated beyond 483 for additional credit.

SOC 486 Internship in Criminal Justice II 3 Cr .
Continuation of SOC 386. Prerequisite: SOC 386.
SOC 493
Senior Seminar 3 Cr .
An integrative reading, discussion, and research course that applies prior sociological knowledge to contemporary concerns and problems. Required of all majors. Prerequisites: Grade of C- or higher in SOC 320, and either SOC 310 or SOC 311. Normally offered every fall.

Independent Study in Sociology/ Criminology
1-4 Cr.
Independent investigation of a specialized topic in sociology. May be taken more than once for credit if the topics are different or if the topics are to be continued.

Honors Work in Sociology
See Honors Work, page 63.
SOC $498 \quad$ Honors Candidacy in Sociology 3 Cr .
See Honors Work, page 63.


## Theatre

## Professors Orchard, Heckler, A. Kessler (chair), R.A. White.

The Theatre Department prepares students for service to a society in which knowledge of the theatre arts is critical to success in a variety of professional vocations including communication, education, entertainment, the law, and religion. The program is designed to engage students in studies of the rich heritage of theatre arts and dance in Western and non-Western cultures. The cocurriculum provides students with opportunities for disciplined creative expression.

The department serves: (1) majors and minors who are preparing for careers in theatre and allied disciplines or in industries where knowledge of theatre production is required; (2) students who take the academic courses to meet the General Education Requirements or who find courses in drama and dance to be attractive components of a liberal arts education; and (3) participants in faculty-supervised co-curricular theatre and dance productions as a way of enriching their lives.

The department offers students a wide range of studies including acting, dance, design, directing, production, technology, and writing. Moreover, the study of dramatic literature is given special prominence in the curriculum.

| THTR 129 | Basic Stagecraft | 2+2, 3 Cr . |
| :---: | :---: | :---: |
| Three courses from the following options: |  | 3 Cr . |
| THTR 130 | Threatre Practicum: Stage Management | $0+2,1 \mathrm{Cr}$. |
| THTR 131 | Theatre Practicum: Scenery and Lighting | $0+2,1 \mathrm{Cr}$. |
| THTR 132 | Theatre Practicum: Costume and Makeup | $0+2,1 \mathrm{Cr}$. |
| THTR 133 | Theatre Practicum: Performance | 0+2, 1 Cr . |
| One course from the following options: |  | 3 cr . |
| THTR 134 | Voice and Diction | 3 Cr . |
| THTR 136 | Movement for the Theatre | 3 Cr . |
| THTR 230 | Costume and Makeup | $2+2,3 \mathrm{Cr}$. |
| THTR 231 | Scenery and Lighting | $2+2,3 \mathrm{Cr}$. |
| THTR 232 | Educational Outreach Theatre | $2+2,3 \mathrm{Cr}$. |
| THTR 235 | Acting I | $2+2,3 \mathrm{Cr}$. |
| THTR 238 | Theatre and Culture I | 3 Cr . |
| THTR 239 | Theatre and Culture II | 3 Cr . |
| THTR 399 | Theatre Colloquium (Taken each semester) | 0 Cr . |
| THTR 431 | Play Directing | $2+2,3 \mathrm{Cr}$. |

Take six additional credits of approved THTR electives 200-level or higher.

## Generalized Theatre Minor (Minimum 18 Cr.)

18 credits in courses agreed upon by the student and the department chair Note: All minors are also encouraged to register for THTR 399 each semester they are on campus.
Specialized Minors

## Acting Minor (Minimum 18 Cr.)

| THTR 134 | Voice and Diction | 3 Cr. |
| :--- | :--- | ---: |
| THTR 136 | Movement for the Theatre | 3 Cr. |
| THTR 230 | Costume and Makeup | $2+2,3 \mathrm{Cr}$. |
| THTR 235 | Acting I | $2+2,3 \mathrm{Cr}$. |
| THTR 335 | Acting II | $2+2,3 \mathrm{Cr}$. |

Three additional credits of approved THTR electives

## Musical Theatre Minor (Minimum 18 Cr.)

| THTR 134 | Voice and Diction | 3 Cr. |
| :--- | :--- | ---: |
| THTR 136 | Movement for the Theatre | 3 Cr. |
| THTR 235 | Acting I | $2+2,3 \mathrm{Cr}$. |
| THTR 289 | Dance Styles and Techniques | 3 Cr. |
| THTR 297 | Musical Theatre Dance | 3 Cr. |
| Three <br> higher. | $\mathbf{3 C r}$. |  |

Theatre Production Minor (Minimum 18 Cr.)

| THTR 129 | Basic Stagecraft | $2+2,3 \mathrm{Cr}$. |
| :---: | :---: | :---: |
| THTR 230 | Costume and Makeup | $2+2,3 \mathrm{Cr}$. |
| THTR 235 | Acting I | 2+2, 3 Cr . |
| THTR 431 | Play Directing | 2+2, 3 Cr . |
| One course from the following options: |  |  |
| THTR 238 | Theatre and Culture I | 3 Cr . |
| THTR 239 | Theatre and Culture II | 3 Cr . |
| THTR 337 | American Theatre | 3 Cr . |
| THTR 390 | Topics and Projects | 3 Cr . |
| Three additional credits of approved THTR electives |  |  |

## Theatre Design Minor (Minimum 18 Cr .)

| THTR 129 | Basic Stagecraft | $2+2,3 \mathrm{Cr}$. |
| :--- | :--- | :--- |
| THTR 230 | Costume and Makeup | $2+2,3 \mathrm{Cr}$. |
| THTR 231 | Scenery and Lighting | $2+2,3 \mathrm{Cr}$. |
| One course from | the following options: |  |
| THTR 238 | Theatre and Culture I | 3 Cr. |
| THTR 239 | Theatre and Culture II | 3 Cr. |
| THTR 337 | American Theatre | 3 Cr. |
| THTR 390 | Topics and Projects | 3 Cr. |
| Six additional credits of approved THTR electives |  |  |

## Approval of Schedules

All students pursuing a major or minor in Theatre must have their schedules approved by the chair of the department or a designated departmental advisor at the beginning of each semester.

## The University Theatre

A co-curricular venue for the study and practice of theatre art, the University Theatre is also a community of thoughtful student and faculty artists and craftspeople serving the students of Valparaiso University. By bringing to the public stage productions of classic and contemporary plays, the University Theatre offers its campus, local, and regional audiences the opportunity to explore the human condition and to celebrate the richness of life itself. The University Theatre is dedicated to excellence in play production, to the development of the skills of understanding, analysis, preparation, and performance of plays in students who are committed to vocations in the theatre, and to the enrichment of the lives of all those who participate in its activities.

The University Theatre's programs include a season of four major productions, an annual concert of dance, experimental theatre, student-directed plays, and theatre outreach performances. Theatre work is focused in performance, production, and management. Advanced students regularly supervise in all areas. Majors in the department are expected to participate actively and frequently in the programs of the University Theatre.

## Theatre Courses

THTR 101 Introduction to Theatre 3 Cr.
An introduction to the field of theatre, surveying the development of performance and design, technology and dramatic literature, especially during the past twenty-five years. Field trip to Chicago. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

THTR 129 Basic Stagecraft 2+2, 3 Cr.
An introduction to the technology, terminology, and practices of modern stagecraft. This course prepares students for more advanced work in theatre technology, costume construction and design, scenery construction and design, lighting design, and stage management. Offered fall semester.

THTR $130 \quad$ Theatre Practicum: Stage Management
$0+2,1 \mathrm{Cr}$.
Theatre is an endeavor that is best learned through practice. This course serves as a laboratory in stage management. This course may be repeated up to maximum of two credit hours.

THTR 131

THTR 232
$\begin{array}{ll}\text { Theatre Practicum: Scenery and Lighting } & 0+2,1 \mathrm{Cr} \text {. }\end{array}$
Theatre is an endeavor that is best learned through practice. This course serves as a laboratory in the construction and handling of scenery, lighting, and sound properties. This course may be repeated up to maximum of two credit hours.

Theatre Practicum: Costume and Makeup $0+2,1 \mathrm{Cr}$.
Theatre is an endeavor that is best learned through practice and this course serves as a laboratory in the construction and handling of costumes, hair, and makeup. This course may be repeated up to maximum of two credit hours.

Theatre Practicum: Performance $0+2,1 \mathrm{Cr}$.
Students may receive academic credit for their work in a faculty directed stage production. Admission by audition only. This course may be repeated for credit.

Voice and Diction
3 Cr .
An introduction to voice and speech science. Enhancement and correction exercises as well as the International Phonetic Alphabet to aid in articulation improvement, dialect correction, and/or acquisition. Offered fall semester.

An introduction to the process of designing scenery and lighting for the stage. The course covers the basics in conceptualizing, drafting, drawing, and presenting of scenic and lighting designs. Offered spring semester, oddnumbered years. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: THTR 129.

Educational Outreach Theatre
2+2, 3 Cr.

Students will be introduced to the theories, methods, and performance practices of Educational Outreach Theatre and will explore theatre techniques used outside of traditional theatre professions, focusing especially on theatre's use in instruction and social interaction. Fieldwork for this course will include performances of plays, developed and rehearsed in class, in local schools. This interdisciplinary course will be useful for students preparing for a variety of professions. Offered in the spring semester, even-numbered years. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Acting I 2+2, 3 Cr.
An introduction to basic acting technique. Students examine ways to construct the interior, physical, and vocal life of a character and learn warm-up procedures, rehearsal strategies, and staging principles. Experiences include scene study and character analysis; performance of monologues and improvisations; field trips. Offered spring semester. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Theatre and Culture I 3 Cr .
A study of European theatre history and dramatic literature from ancient Greece to the Renaissance, featuring an integrated analysis of visual art, architecture, music, drama, and social history. Development of dramatic and theatrical art is traced through media presentations, live performances, lectures, and discussions. Prerequisite: sophomore standing or approval of the chair of the department. Offered fall semester, odd-numbered years. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Theatre and Culture II
3 Cr .
A study of European and American theatre history and dramatic literature from the Renaissance through the modern period, featuring an integrated analysis of visual art, architecture, music, drama, and social history. Development of dramatic and theatrical art is traced through media presentations, live performances, lectures, and discussions. Prerequisite: sophomore standing or approval of the chair of the department. Offered spring semester, odd-numbered years. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Writing for Stage and Screen
3 Cr .
Devoted to the study of creative writing in dramatic form, giving special attention to the particular requirements of stage, film, and television. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: Sophomore standing or consent of the instructor.

Dance Styles and Techniques
3 Cr.
Introductory performance-based course in the foundations of concert dance. Ballet, modern, and jazz dance techniques will be introduced. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.
Ballet Technique I 3 Cr . Introductory performance-based course in the foundations of concert dance and classical ballet technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Modern Technique I
3 Cr .
Introductory performance-based course in the foundations of concert dance and classical modern technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Jazz Technique I
3 Cr .
Introductory performance-based course in the foundations of concert dance, classical jazz, and contemporary jazz technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Lyrical Jazz Technique I
3 Cr .
Introductory performance-based course in the foundations of concert dance and lyrical jazz technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Tap Technique I
3 Cr.
Introductory performance-based course in the foundations of concert dance and classical tap technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

Musical Theatre Dance 3 Cr .
Introductory performance-based course in the foundations of musical theatre dance technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements.

An introduction to the craft of choreography through the creation and performance of solos and small group dance works. Previous dance experience and a readiness to create are requisite. Instructor approval required. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: One course from (THTR 289, THTR 292, THTR 293, THTR 294, THTR 295, THTR 296, THTR 297), and consent of the chair of the department.

## Acting II

$2+2,3 \mathrm{Cr}$.
A continuation of work in acting theory and technique, featuring intensive training in comic, dramatic, and lyric scene performance. Students consider the methods of influential acting teachers and apply advanced techniques such as active analysis. Coursework culminates in the annual Acting/Directing Showcase. Two evening rehearsals during the week of the showcase are required. Offered most fall semesters. Prerequisite: THTR 235.

## THTR 337/537 American Theatre

3 Cr.
A study of American theatre and drama, with particular emphasis given to the development of musical theatre and to significant American playwrights and theatre practitioners of the modern and postmodern periods. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: junior standing or consent of the chair of the department.

Internship in Theatre
$1-3 \mathrm{Cr}$.
Students may arrange, in consultation with the theatre faculty and on-site supervisors, for field work that provides intensive experience in a particular area of theatre, dance, film, or television. May be repeated for up to 6 credits. Prerequisite: consent of the chair of the department.

Topics and Projects
1-3 Cr.
Specific projects or specialty courses based on interests of students and faculty. Example topics: Chicago Theatre, Musical Theatre, The London Stage (study abroad course), Contemporary and Postmodern Theatre, Theatre of the Non-Western World, The Vampire Tradition, Auditioning, Acting for the Camera, Scene Painting, Design for the Theatre.

Ballet Technique II
3 Cr .
A performance-based course in intermediate and advanced concert dance and classical ballet technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: THTR 292 or consent of the chair of the department.

THTR 393 Modern Technique II 3 Cr.
A performance-based course in intermediate and advanced concert dance and classical modern technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: THTR 293 or consent of the chair of the department.
THTR 394 Jazz Technique II
3 Cr.
A performance-based course in intermediate and advanced concert dance, classical jazz, and contemporary jazz technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: THTR 294 or consent of the chair of the department.

## THTR 395 Lyrical Jazz Technique II

3 Cr .
A performance-based course in intermediate and advanced concert dance and lyrical jazz technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: THTR 295 or consent of the chair of the department.

Tap Technique II
A performance-based course in intermediate and advanced concert dance and classical tap technique. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. Prerequisite: THTR 296 or consent of the chair of the department.

THTR 399
Theatre Colloquium 0 Cr .

A required course for theatre majors which provides weekly opportunities to examine a variety of theatrerelated topics and vocations. All theatre majors are required to register for THTR 399 each semester they are on campus.

Play Directing
2+2, 3 Cr.
Study in the theories and studio practice in the art of directing for the theatre, including the process of play selection and analysis, methods of casting, principles of collaboration, staging techniques, and rehearsal procedures. Coursework culminates in a public performance in the annual Acting/Directing Showcase. Serves as Senior Capstone course. Offered fall semester. Prerequisites: THTR 129, THTR 230, THTR 231, THTR 235 and one course in theatre literature (THTR 238, THTR 239, THTR 337, or THTR 390), or consent of the chair of the department.

Acting III
3 Cr .
A course in advanced acting techniques for performing period styles. Students will concentrate on scene study with emphasis on voice, movement, gesture, character, language, tempo, and special techniques for performing material such as classical Greek tragedy, Shakespeare, Comedy of Manners, Commedia dell' Arte, Brechtian Drama, Theatre of the Absurd, and other stylistic challenges. Prerequisite THTR 335 or consent of the instructor.

Honors Work in Theatre
3 Cr.
See Honors Work, page 63.
THTR 498
Honors Candidacy in Theatre
3 Cr .
See Honors Work, page 63.


## Theology

## Professors Becker, Heider, J. Moore, Rittgers; Associate Professors M. Bartusch (chair), L. Driver, Pati; Lecturers Jones, Weber; Visiting Assistant Professors Gehrke, Ghormley.

The Theology Department of Valparaiso University has as its main purpose the study, transmission, and interpretation of the Christian tradition as a part of and in relation to the wider religious heritage of humankind. It is the goal of the department to enable all graduates of Valparaiso University to be knowledgeable of the Christian faith, sensitive to religious issues in our global society, and prepared for roles in which their understanding of religion may enhance their contribution to church and society. Since this is a theology department within a university, our work is founded upon the liberal arts tradition of inquiry; competing ideas meet and are freely debated in the search for truth. The Theology Department plays an essential part in expressing and defining the University's commitment to the Christian tradition, particularly to the Lutheran perspective. The department seeks to assist its students in becoming more aware of their own religious traditions, more critical and affirming in their appropriation of them, and more respectful of other traditions.

## General Education

The Theology component of the General Education Requirement at Valparaiso University requires that students complete two courses: THEO 200 (or CC 215 for Christ College students) and any Theology course at the 300 -level. THEO 200 is a prerequisite for all upper level courses (except for transfer students and students who receive a waiver from the chair of the Theology Department). Students whose academic programs require only one course in Theology must take THEO 200.

## Bachelor of Arts - Theology Major (Minimum 34 Cr.)

| Foundation |  | 3 Cr. |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| THEO 200 | The Christian Tradition | 3 Cr . |
| CC 215 | The Christian Tradition | 3 Cr . |
| Biblical Studies |  | 3 Cr . |
| One Theology course numbered 310-319 |  |  |
| Foundations of Chris | nity | 3 Cr. |
| One Theology course numbered 320-329 |  |  |
| Theology and Ethics |  | 3 Cr. |
| One Theology course numbered 330-349, or 353 (when topic is appropriate) |  |  |
| Religions of the World |  | 3 Cr. |
| One Theology course numbered 360-369 |  |  |
| Research and Writing in the Discipline |  | 4 Cr . |
| THEO 393 | Theories and Methods in Theological and Religious Studies | 3 Cr . |
| THEO 492 | Research and Writing in Theology | 1 Cr . |
| Seminar |  | 3 Cr . |
| THEO 493 | Theology Seminar | 3 Cr . |
| Upper-Level Theology |  | 12 Cr . |
| Four additional 300-level (or higher) Theology courses (except S/U courses) |  |  |

## 4+3 Option

The " $4+3$ Option" refers to the years required to earn a B.A. at Valparaiso and then an M.Div. or M.A. at the Lutheran School of Theology at Chicago (LSTC), thereby reducing the overall time to complete a graduate degree by a full year. Majors in theology at Valparaiso University have the option to complete their major by taking up to nine courses in theology that are accepted for both undergraduate credit at Valparaiso University and graduate credit at LSTC. They will complete these courses meeting graduate level requirements as determined by an agreement between Valparaiso University and LSTC. By doing so, these majors will receive a B.A. in theology and will also qualify for up to nine courses of credit toward their Master's level work at LSTC. Majors choosing this option will be advised by Valparaiso University Department of Theology advisors and will be approved for this work by the LSTC faculty.

| Up to nine courses from the following options: |  |  |
| :--- | :--- | :--- |
| THEO 314/514 | The Pentateuch | 3 Cr. |
| THEO 315/515 | The Prophets | 3 Cr |
| THEO 318/518 | Jesus and the Gospels | 3 Cr |
| THEO 320 | Early Christianity | 3 Cr |
| THEO 323/523 | Reformation Theology | 3 Cr |
| THEO 324/524 | Christianity in America | 3 Cr |
| THEO 334 | Holocaust Theology | 3 Cr |
| THEO 341 | Bioethics | 3 Cr . |
| THEO 343 | Theology of Marriage and Sexuality | 3 Cr |
| THEO 345/545 | The Church in the World | 3 Cr . |
| THEO 361/561 | Indian Religions and Culture | 3 Cr |
| THEO 362/562 | Islamic Religion and Culture | 3 Cr. |

Other courses might be added as they are developed in the future and are approved, including future courses offered and taught by faculty at LSTC.

## Theology Minor (Minimum 18 Cr.)

One course from the following options:
THEO 200 The Christian Tradition 3 Cr .
CC 215 The Christian Tradition (for Christ College students) 3 Cr .

Research and Writing in the Discipline $\quad \mathbf{3 C r}$. THEO 393 Theories and Methods in Theological and Religious 3 Cr . Studies
Twelve additional Theology credits, chosen by the student in consultation 12 Cr . with the chair of the department or the chair's designated representative

## Programs

The department provides programs of study and advising for students who wish to prepare for professional careers in the Church:

1. Programs of study in preparation for Diaconal Ministry are structured by the department in cooperation with the Lutheran Deaconess Association (see page 62).
2. Students preparing for seminary should consult "Preparation for Seminary" on page 61. Further information is available from the chair of the Department of Theology and on the department's Web site: www.valpo.edu/theology.
3. Students interested in service as directors of Christian Education, Youth Ministers, or in other ministries that may be held with a bachelor's degree, should take the Theology and Ministry major (see page 285).

## Approval of Schedules

All students taking a major in Theology must have their schedules approved by the chair of the department or by their assigned departmental advisor at the beginning of each semester.

A study of the origins and development of Christian thought as it forms communities and engages the world. Prerequisite for all upper level courses in Theology (except for transfer students and students who receive a waiver from the chair of the Theology Department). Sophomore standing recommended; at least one semester of college required. Some sections of this course may be used to fulfill the Writing Intensive General Education Requirement.

## Biblical Studies Courses

| THEO 311/511 | Understanding the Old Testament <br> A study of the history and theology of the Old Testament with attention to its role in Christian faith. |
| :--- | :--- |
| THEO 312/512 | Understanding the New Testament <br> A study of the history and theology of the New Testament with attention to its rootage in the Old Testament. |

THEO 314/514 The Pentateuch 3 Cr.
A study of the Pentateuch with emphasis on Israel's understanding of the beginning, the history of the patriarchs, the exodus, the wilderness wanderings, and the preparation for entering the promised land.

THEO 315/515 The Prophets
3 Cr.
A study of the role of the prophets in Israelite religion. Special attention is given to the historical origins of the prophetic movement, its impact on Israel's political, social, and religious life, and the continuing significance of the prophetic message in Jewish and Christian thought.

THEO 317/517 The World of the New Testament
3 Cr .
A study of the societies and culture in which Christian communities arose with a view to understanding the New Testament better and determining its contemporary significance more accurately. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

THEO 318/518 Jesus and the Gospels
3 Cr .
A comparative study of the New Testament gospels with a focus on the uniqueness of each in its presentation of the story of Jesus.

THEO 319/519 Topics in Biblical Studies
3 Cr .
A study of a specific topic such as archaeology and the religions of the ancient near East, psalms and prayers of ancient Israel, and issues in biblical interpretation. May be repeated for credit if topics are different.

## Foundations of Christianity Courses

## Early Christianity

3 Cr.
A study of the beliefs, practices, and experiences of the early Christians from the second to the sixth century. Particular attention will be given to early Christian theological methods and the relationship between belief and behavior.

THEO 321 Medieval Christianity: East and West 3 Cr.
A comparative study of eastern and western Christianity from the fifth to the fifteenth century. The course will examine the distinctive characteristics of both Christian traditions including missions, ecclesiastical organization, Christological developments, reform movements, and devotional practices. May be used to fulfill the Cultural Diversity course component of the General Education requirements.

THEO 322 Early Christian Social Thought
3 Cr.
A study of Christian concepts about the human person in community and the shape of Christian social action from the first to the sixth century. Particular attention will be given to the spheres of economics, education, family, and health.

THEO 323/523 Reformation Theology
3 Cr .
A study of the major theological developments of the sixteenth-century reform movements, both Protestant and Catholic.

THEO 324/524 Christianity in America
3 Cr .
An investigation of the history of Christianity in America, with special emphasis on the interaction between religion and cultural developments.

Why Am I Here? The Called Life
3 Cr .
An examination of Christian perspectives on vocation in its many meanings and embodiments. Using resources primarily from the Christian tradition, students will analyze issues such as the relationship between life-calling and career, discerning the relationship of divine and human purposes, and the role of the individual and community in shaping identity. Particular attention will be given to developing personal vocational questions and applying theological resources to the students' own search for meaning and purpose.

THEO 328/528 Topics in Lutheran History and Theology 3 Cr.
An examination of selected issues, movements, thinkers, or institutions within the Lutheran tradition. May be repeated for credit if topics are different.

THEO 329/529 Topics in Christian History 3 Cr.
An examination of a selected topic or thinker in the history of Christian thought and institutions. May be repeated for credit if topics are different.

## Theology and Ethics Courses

THEO 330/530 Issues in Modern Christian Theology 3 Cr.
A study of central themes and problems in modern Christian theology. Issues may include the reality and nature of God, the historical Jesus, creation, evil, human beings, salvation, the divided churches, and interreligious dialogue.

THEO $332 \quad$ Christian Theology and the Moral Life
3 Cr .
An examination of basic concepts of Christian ethics such as the sources of moral knowledge, the structure of Christian life, and the virtues central to it.

THEO 333/533 Black Theology and Black Church 3 Cr. A study of Black theological discourse in the United States and Africa. The course focuses on the composite causes of racial oppression and explores the relationship between black theology and "majority world" peoples, women's struggles, black families, and, most importantly, the praxis of black church ministry. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. Some sections of this course may fulfill the Writing Intensive General Education Requirement.

A systematic study of the many issues stemming from the events of the Nazi Holocaust and how those events have affected both Jews and Christians. The course constructs a possible religious and moral response to the evil of the Holocaust.

THEO 335 Philosophy of Religion 3 Cr.
(Also offered as PHIL 330.) A philosophical analysis of some of the beliefs, concepts, and problems involved in traditional theistic beliefs and its critics, exploring how these debates impact the church and its beliefs. Problems include arguments for the existence of God, religious experience, problem of evil, and faith and reason. Prerequisite: one course in philosophy or THEO 200.

THEO 341 Bioethics
3 Cr .
(Also offered as PHIL 341.) A study of a range of moral issues encountered in both clinical medicine and human experimentation.

A systematic study of the many issues stemming from contemporary views of marriage and sexuality, the course will be an opportunity to judge a variety of possible theological views, test views with concrete experiences and real issues, and begin the process of forming a personal viewpoint.

THEO $344 \quad$ Theology and the Scientific World
3 Cr .
A study of the relationship between religion and science, looking not only at controversial issues but also at the positive dialogue between theologians and scientists. The course will focus on topics like creation and evolution, cosmology and theology, genetics, and human uniqueness.

| THEO 345/545 | The Church in the World <br> A study of the life and mission of the church with emphasis on movements for renewal, reform, and reunion. <br> Special attention is given to developments in Latin America and/or Africa. May be used to fulfill the Cultural <br> Diversity course component of the General Education Requirements. |
| :--- | :--- |
| THEO 346/546 | Studies in Theology, Health and Healing <br> An examination of a selected topic such as death and dying, or spiritual needs and health care. May be repeated <br> for credit if topics are different. |
| THEO 348 | Topics in Modern Christian Theology <br> An examination of a selected thinker or theme in Christian thought of the last three centuries. May be repeated <br> for credit if topics are different. |
| THEO 349 | Topics in Religious Ethics |

An examination of a selected thinker or theme in religious ethics. May be repeated for credit if topics are different.

## Religions of the World Courses

THEO 360/560 Themes in the History of Religions 3 Cr.
A study of the history and themes of various religious traditions, with special attention to methods for studying those traditions. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

THEO 361/561 Indian Religions and Culture
3 Cr . A study of religious traditions of India, viewed through both popular devotional practices and religious texts and rituals. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

THEO 362/562 Islamic Religion and Culture 3 Cr.
A study of the life of Muhammad, the teachings of the Quran, traditional practices and institutions in Islamic society, and contemporary developments in the Muslim world. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

THEO 363/563 Religions of China and Japan 3 Cr.
A study of the religious traditions (Confucianism, Taoism, Buddhism, and Shinto) of China and Japan. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

| THEO 364 | Native American Religions |
| :--- | :--- |
|  | A study of religious worldviews present in Native American societies north of Mexico. May be used to fulfill the |
| Cultural Diversity course component of the General Education Requirements. Some sections of this course may |  |
| be used to fulfill the Writing Intensive General Education Requirement. |  |

THEO 367/567 Topics in South Asian Religions
3 Cr .
A study of a selected topic in the religions of South Asia. May be repeated for credit if topics are different. May be used to fulfill the Cultural Diversity course component of the General Education Requirements.

THEO 368/568 Topics in Abrahamic Religions 3 Cr.
A study of a selected topic in those religious traditions (Judaism, Christianity, Islam) that trace their history from Abraham. May be repeated for credit if topics are different.

THEO 369
Topics in Religions in the Americas
3 Cr .
A study of selected topics (such as recent religious movements, diaspora communities) in religion in the Americas. May be repeated for credit if topics are different.

## Pre-Professional Study Courses

An examination of selected topics such as Christian response to social victims, Christian faith and politics, ethics of cultural encounter, and Christian education. May be repeated for credit if topics are different.

THEO 399 Church Vocations Symposium 0 Cr.
Presentations and discussions of topics of special interest to students in pre-seminary studies or who are preparing for other church vocations. All students in these curricula are expected to register for this course each semester and to attend each session. S/U grade.

THEO 451/551 Theology of Diaconal Ministry 3 Cr. A study of the historical and theological foundations of diaconal ministry. Attention is given to the role of the diaconate in the church, the development of diaconal community, and the nurture of a spirituality of service. Designed principally for diaconal and church work students. Others must have the consent of the instructor. Prerequisite: junior or senior standing.

## THEO 453/553 Clinical Education for Ministry

3 Cr .
A carefully supervised practicum in ministry to the physically ill and the elderly. Designed principally for senior Diaconal and Pre-Seminary students, this course in practical theology engages student in disciplined reflection on their ministry. Usually S/U basis. Prerequisite: junior or senior standing.

## THEO 456/556 Church Music and Liturgical Theology

3 Cr .
(Also offered as MUS 473.) An intensive academic study of the history and practices of music and liturgy in Christian churches with an emphasis on the Lutheran heritage. Study includes both primary liturgical theology (participation in a variety of liturgical expressions), and secondary liturgical theology (reflection on liturgical forms and structure). Topics include theologies and practices of music, history of hymnody, and music in worship. Open to upper division music majors, as well as upper division and graduate theology majors and minors; other non-majors may be admitted by permission of the instructor. May be used to fulfill the Humanities: Fine and Performing Arts component of the General Education Requirements. May not be used to fulfill the upper level Theology component of the General Education Requirements.

THEO $480 \quad$ Practicum in Ministry 1-2 Cr.
Field experience in various local agencies, together with reflection on the work being done. This course may not be used to fulfill the Theology component of the General Education Requirement. A maximum of three credit hours may be applied to the theology major. It may be repeated for a maximum of four credits, and is offered only on an S/U basis. Arranged with the chair of the department. Prerequisite: junior or senior standing.

THEO 481 Basic Homily Preparation
1 Cr .
A basic introduction to methods of preparing and delivering biblical, liturgical homilies in a variety of worship settings. This course may not be counted toward the theology major or minor. It may be repeated for a maximum of two credits, and is offered on an $\mathrm{S} / \mathrm{U}$ basis. Prerequisite: junior or senior standing.

## Advanced Study Courses

THEO 393

## THEO 490/590

Topics in Theology
1-3 Cr.
A study of a selected topic in theology, intended primarily for majors, minors, and advanced students. May be repeated for credit if topics are different.
Theories and Methods in Theological and Religious Studies
3 Cr .
This courses teaches students to engage with theories and methods used in the academic study of religion and theology with some attention to the history of the disciplines. Prerequisites: THEO 200, major or minor status or permission of the chair, and junior standing recommended.

## Research and Writing in Theology

 1 Cr .A study of resources and methods for research and writing in theology, to be taken in conjunction with a 3-credit 300-level theology course. Must be taken once for credit; may be taken as often as needed. This course will support the writing of a major paper in a 300-level theology course taken concurrently, ordinarily in the student's junior year. Prerequisite: declared Theology or Theology and Ministry major or permission of chair.

THEO 493

Advanced study culminating in the writing of a senior thesis. Prerequisites: senior standing or consent of the chair of the department.

THEO 495 Supervised Reading and Research
1-3 Cr.
An opportunity for students to read a number of significant works on a given topic in theology, or to do research on a topic which is not covered in any scheduled course offerings of the department and to write a major paper. Prerequisites: junior standing, 9 credit hours in theology, and consent of the chair of the department.

Honors Work in Theology
3 Cr .
See Honors Work, page 63.
Honors Candidacy in Theology
3 Cr .
See Honors Work, page 63.

## Theology and Ministry

The Theology and Ministry major is administered by the Department of Theology.

## Objectives

This bachelor-level major is designed for students seeking to serve in Lutheran or other Christian congregations as staff members with responsibility to children, youth, families, and persons of all ages. The major provides a broad range of foundational courses in theology, as well as practical learning experiences. Building on the University's program of General Education and the resources of the Department of Theology, students, in consultation with their academic advisor in the Department of Theology, are able to customize a course of study. This major may also be used as a second major for students with other professional or career goals, but who wish an education that will enable them to serve in leadership positions within a local congregation or other organization on either a part-time or volunteer basis.

## Bachelor of Arts - Theology and Ministry Major (Minimum 43 Cr.)

| Theology Courses |  | 28 Cr. |
| :---: | :---: | :---: |
| Core Foundation ${ }^{12}$ |  | 19 Cr . |
| One course from the following options: |  | 3 Cr . |
| THEO 200 | The Christian Tradition | 3 Cr . |
| CC 215 | The Christian Tradition (for Christ College students) | 3 Cr . |
| Biblical Studies |  | 3 Cr . |
| One Theology course numbered 310-319 |  |  |
| Foundations of Christianity |  | 3 Cr. |
| One Theology course numbered 320-329 |  |  |
| Theology and Ethics |  | 3 Cr. |
| One Theology course numbered 330-349 or 353 (when topic is appropriate) |  |  |
| Religions of the World |  | 3 Cr. |
| One Theology course numbered 360-369 |  |  |
| Research and Writing in the Discipline |  | 4 Cr . |
| THEO 393 | Theories and Methods in Theological and Religious Studies | 3 Cr . |
| THEO 492 | Research and Writing in Theology | 1 Cr . |
| Seminar |  | 3 Cr . |
| THEO 493 | Theology Seminar | 3 Cr . |
| Ministry Courses |  | 9 Cr . |
| Pre-Professional Study |  | 6 Cr . |
| Two courses from the following options: |  |  |
| THEO 353 | Studies in Theology and Practice | 3 Cr . |
| THEO 451 | Theology of Diaconal Ministry | 3 Cr . |
| THEO 453 | Clinical Education for Ministry | 3 Cr . |
| THEO 456 | Church Music and Liturgical Theology | 3 Cr . |
| THEO 481 | Basic Homily Preparation | 1 Cr . |
| THEO 480 | Practicum in Ministry | 3 Cr . |
| Electives in Complemen | ry Disciplines ${ }^{13}$ | 12 Cr . |
| Twelve credits from | he following options: |  |
| ART 132 | Introduction to Design and Digital Media | 0+6, 3 Cr . |
| ART 230 | Graphic Design I | 3 Cr . |
| COMM 230 | Graphic Design I | 3 Cr . |
| COMM 243 | Public Communication | 3 Cr . |
| COMM 244 | Persuasion and Advocacy | 3 Cr . |
| COMM 345 | Leadership Communication | 3 Cr . |
| COMM 366 | Negotiation and Conflict Resolution | 3 Cr . |
| ED 206 | School and Society | 3 Cr . |

[^8]| ED 304 | Educational Psychology | $3+0,3 \mathrm{Cr}$. |
| :---: | :---: | :---: |
| Note: PSY 110 is a prerequisite for ED 304, but may not be counted among courses for this major. |  |  |
| ENGL 431 | Advanced Composition | 3 Cr . |
| Note: ENGL 200 is a prerequisite for ENGL 431, but may not be counted among courses for this major. |  |  |
| PSJ 201 | Principles of Peace and Social Justice | 3 Cr . |
| PHIL 115 | Experience and Existence | 3 Cr . |
| PHIL 125 | The Good Life | 3 Cr . |
| PSY 225 | Social Psychology | 3 Cr . |
| PSY 250 | Principles and Applications of Learning | 3 Cr . |
| PSY 332 | Psychology of Adulthood and Aging | 3 Cr . |
| PSY 350 | Human Cognition | 3 Cr . |
| PSY 445 | Community and Health Psychology | 3 Cr . |
| PSY 461 | Introduction to Counseling | 3 Cr . |
| Note: PSY 110 is a prerequisite for all psychology courses, but may not be counted among courses for this major. |  |  |
| SOCW 151 | Introduction to the Profession of Social Work | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| SOCW 220 | Human Behavior and Social Environment | 3 Cr . |
| SOCW 240 | Communication and Counseling Skills | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights \& Justice | 3 Cr . |
| SOCW 410 | Analysis of Social Policy | 3 Cr . |
| SOC 220 | The Family | 3 Cr . |
| SOC 245 | Social Psychology | 3 Cr . |
| SOC 270 | Juvenile Delinquency | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOC 325 | Urban Sociology | 3 Cr . |
| SOC 340 | Gender | 3 Cr . |
| Note: SOC 110 is a prerequisite for all 300-level sociology courses, but may not be counted among courses for this major. |  |  |
| FLS 308 | Spanish for Service Professionals | 3 Cr . |
| Note: FLS 220, FLS 230, or FLS 231 is a prerequisite for FLS 308, but may not be counted among courses for this major. |  |  |

Students broaden their contextual knowledge of ministry by taking a minimum of 12 credits in one or more complementary disciplines as listed above. Alternative courses are permitted for the sake of specific professional objectives with the approval of the student's academic advisor and the chair of the Department of Theology.

Note: Courses taken for this major may not be counted for credit toward a minor or a second major.

## Symposium and Para-Curricular Activities

Students completing the Theology and Ministry major are also encouraged to participate in THEO 399: Church Vocations Symposium and other para-curricular activities arranged by the Center for Church Vocations (see http://www.valpo.edu/ccv).

## Candidacy and Rostering

Information about rostering in various denominations is available on the Theology Department's website: http://www.valpo.edu/theology.

## Christ College <br> The Honors College



## Interim Dean Jennifer Prough, Ph.D. Associate Dean Margaret Franson, M.A.L.S.

Professors T. Howard, Schwehn; Associate Professors Buggeln, Prough, Smith; Assistant Professors Graber, Jakelić, Puffer, Upton; Lecturer Western; Adjunct Assistant Professor Creech, A. Howard.

Christ College is the honors college of Valparaiso University. Established in 1967, Christ College celebrates over forty years of providing honors-level liberal arts education that integrates fields of study and enables students to achieve a measure of intellectual independence.

Christ College students are concurrently enrolled in one of the University's undergraduate Colleges--Arts and Sciences, Business, Engineering, or Nursing and Health Professions--where they earn their bachelor's degrees. Study in Christ College complements all academic programs, providing stimulating interdisciplinary study in the humanities with master teacher-scholars and academically talented students. Many Christ College courses fulfill the University's General Education Requirements.

Completion of a program of study in Christ College leads to graduation with the honors designation Christ College Scholar. A student may also earn a complementary major or an academic minor in Christ College humanities coursework. Requirements for these programs are described in detail beginning on page 290.

Christ College is dedicated to the cultivation of intellectual, moral, and spiritual virtues. The college's name suggests its compatibility with Valparaiso University's definition of itself as a university in the Christian intellectual tradition, comprised of people of many faiths and beliefs.

Christ College endeavors to develop among its members a sense of community: a community of seekers of knowledge and truth, a community within which free inquiry is encouraged and principled commitment is fostered, a community of scholars
engaged in preparing themselves for active participation in the larger human community. Much of the curricular structure of Christ College and many of its co-curricular activities are devoted to developing this sense of community.

Its attractive facilities also encourage community-building. Christ College is located in Mueller Hall, a modern building in the heart of campus where students and faculty interact in seminar-sized classrooms, a 60 -seat multimedia lecture hall, a comfortable lounge/ art gallery, a landscaped courtyard, a multipurpose refectory, and faculty offices.

By developing an academic community that gathers outside as well as inside the classroom, Christ College promotes a particular set of educational virtues and ideals among its members. Among these are direct and personal relationships between students and faculty, a spirit of cooperation and mutual growth through free exchange of ideas, a willingness to challenge and scrutinize ideas and beliefs (including one's own), and a concern for the integration of academic learning into a responsible and meaningful life.

While stressing intellectual excellence and the fullest use of one's own mental gifts, the college also attempts to develop within its members the virtues of modesty and civility, a humble awareness of limitations and failures, and a sense that the more knowledge is gained, the more it is to be used wisely in the service of others. To the extent that these values are actually realized in its members, Christ College considers them prepared for responsible vocations in society and for leadership and service in their faith communities.

## Admission and Membership in Christ College

## Freshman Admission

To be considered for membership in Christ College beginning in the freshman year, students must first be admitted to Valparaiso University. Admitted students with superior academic records, strong SAT or ACT scores, proven leadership in extracurricular activities, and a measure of curiosity and creativity are invited by the dean of Christ College to apply for the honors program. Between 80 and 90 freshmen are accepted into the Christ College Freshman Program each fall.

The Christ College Freshman Program (CC 110: Texts and Contexts I and CC 115: Texts and Contexts II) includes a two semester course in the great traditions of humankind with readings in history, literature, philosophy, and religion from the earliest recorded thought to the present day. Coursework emphasizes close reading, thoughtful discussion, and critical writing. Special Freshman Program activities include drama, music, and debate.

## Upper Class Admission

Students with superior records of academic achievement may be invited to join Christ College later than the start of the freshman year at the dean's discretion. For example, some sophomores are admitted to Christ College each fall. These students enroll in sophomore level Christ College courses and begin the pursuit of Christ College Scholar graduation distinction.

Still other students enroll in one or more courses offered by the college, but do not pursue honors program designations. Such enrollment is subject to the approval of the dean and limited only by class size.

Any Valparaiso University student--whether or not he or she is a member of Christ College- -may pursue a complementary major or a minor in humanities through Christ College coursework.

## Membership in Christ College

A student formally admitted to Christ College, either as a freshman or upper class student, in order to pursue a Honors distinction, is designated a member of Christ College. Once admitted to membership, a student's status is regularly reviewed by the dean and faculty to determine whether the student is satisfying the standards appropriate to membership in the Honors College. These requirements include contribution to the common life of the college, satisfactory academic progress toward a degree in one of the undergraduate colleges, and continuing academic achievement consonant with the mission and standards of Christ College.

Even when students are not directly registered in Christ College courses during a given semester, they are expected to contribute to the College's common life. This includes attendance at the Christ College Symposium and regular consultation with a Christ College advisor.

Continuing academic achievement at the honors level includes 1) a cumulative grade point average of 3.30 in all coursework completed at the University and 2) a cumulative grade point average of 3.30 in all coursework completed in Christ College. Students who fall below these standards at the end of a semester or academic year will be notified by the dean and reminded that Christ College Scholar distinction requires a 3.30 cumulative average for work in both Christ College and Valparaiso University. In some cases students will be asked to meet with their advisor and/ or the dean to discuss their status, and may be counseled not to continue in Christ College.

However, continuing membership in Christ College is not determined solely by particular criteria such as cumulative grade point average or the student's academic record for a particular semester or year. The dean and faculty consider the complete
circumstances and direction of each student's total academic career and role in Christ College, and retain the right to maintain or terminate a student's membership in Christ College in light of these conditions. The final approval for those who graduate with the designation of Christ College Scholar is made by the dean upon recommendation of the faculty.

The dean and faculty take an interest in the total program of every member of Christ College, and seek to enhance the quality of educational experience for each individual student. Accordingly, the dean may authorize certain variations in the normal academic requirements of a student if such variations seem desirable in the best interests of the student. For example, the dean may permit a student to carry extra credit hours and to waive certain University requirements if such waivers are justified. Members of the college are normally expected to meet all University requirements for graduation except where such modifications have been explicitly authorized by the dean. In general, the faculty may tailor a program to meet a student's interests and needs within the general framework and spirit of the University's requirements.

## Academic Advising and Approval of Course Schedules

Advising of students pursuing programs in Christ College is under the general direction of the associate dean. Christ College freshmen are usually advised by a member of the Christ College faculty. Sophomores, juniors, and seniors are advised by the associate dean, with faculty members available to consult at any time.

Students are encouraged to confer regularly with their Christ College advisors to select courses, to meet University and college graduation requirements, to assure orderly progress in their chosen programs, and to assist in career planning and related matters.

In addition to a Christ College advisor, students have an advisor in the other college in which they are simultaneously enrolled, and are expected to confer regularly with that advisor as well.

It is each student's responsibility to know curriculum requirements, academic policies, deadlines for academic actions, and Christ College membership criteria.

## Programs of Study

Completion of the degree requirements of the college in which the Christ College student is concurrently enrolled leads to the bachelor's degree appropriate to that college. In addition, a member of Christ College, by meeting the appropriate requirements, may graduate as a Christ College Scholar. The transcript carries the notation along with an explanation of its meaning.

Christ College students as well as students who are not members of Christ College may pursue a complementary major in humanities or a minor in humanities through the college.

## Christ College Scholar

The requirements for this designation are:

1. Membership in Christ College for a minimum of three semesters.
2. A cumulative grade point average of 3.30 in all coursework completed at the University and in all coursework completed in Christ College for the Scholar designation.
3. A minimum of 16 credit hours beyond the Christ College Freshman Program courses CC 110 and CC 115. A student who enters the college after the freshman year and who has not taken CC 110 and CC 115 is required to take one additional 3 credit seminar (CC 300 or CC 325). Students may not choose the S/U grading option for coursework beyond CC 110 in any course used to fulfill the requirements for Scholar designation.

| CC 110A | Texts and Contexts I: First Half Fall Semester | 3 Cr . |
| :---: | :---: | :---: |
| CC 110B | Texts and Contexts I: Second Half Fall Semester | 3 Cr . |
| CC 110L | Drama Workshop Fall Semester | 2 Cr . |
| CC 115A | Texts and Contexts II: First Half Spring Semester | 3 Cr . |
| CC 115B | Texts and Contexts II: Second Half Spring Semester | 3 Cr . |
| CC 115L | Debate Workshop Spring Semester | 2 Cr . |
| CC 215 | The Christian Tradition | 3 Cr . |
| One course from the following options: |  |  |
| CC 205 | Word and Image | 3 Cr . |
| CC 255 | Interpretation: Self, Culture, and Society | 3 Cr . |
| Three courses from the following options, at least one of which must be CC 325: |  |  |
| CC 300 | Seminar (may be repeated) | 3 Cr . |
| CC 325 | Seminar (may be repeated) | 3 Cr . |
| CC 455 OR | Inquiry in the Liberal Arts | 3 Cr . |
| An approved course from an approved off-campus study program |  | 3 Cr . |
| CC 499 | Senior Colloquium | 1 Cr . |

## Complementary Major in Humanities (Minimum 24 Cr.)

The complementary major in humanities is ordinarily pursued in conjunction with the Christ College Scholar program of studies, but may be pursued independently from the Scholar requirements. Any student, whether or not a member of Christ College, may earn a complementary major in humanities.

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| CC 205 | Word and Image | 3 Cr . |
| CC 255 | Interpretation: Self, Culture, and Society | 3 Cr . |
| Seven courses from the following options, at least one of which must be CC 325: |  |  |
| CC 300 | Seminar (may be repeated) | 3 Cr . |
| CC 325 | Seminar (may be repeated) | 3 Cr . |
| CC 455 OR | Inquiry in the Liberal Arts | 3 Cr . |
| An approved course from an approved off-campus study program |  |  |

A course used to fulfill the requirements of a complementary major in humanities may not be used to fulfill the minimum requirements of any other major or minor.

## Humanities Minor (Minimum 18 Cr.)

The minor in humanities is ordinarily pursued in conjunction with the Christ College Scholar program of studies, but may be pursued independently from the Scholar requirements. Any student, whether or not a member of Christ College, may earn a minor in humanities.

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| CC 205 | Word and Image | 3 Cr . |
| CC 255 | Interpretation: Self, Culture, and Society | 3 Cr . |
| Five courses from the following options: |  |  |
| CC 300 | Seminar | 3 Cr . |
| CC 325 | Seminar | 3 Cr . |
| CC 455 OR | Inquiry in the Liberal Arts | 3 Cr . |

An approved course from an approved off-campus study
program
A course used to fulfill the requirements of a minor in humanities may not be used to fulfill the requirements of any other major or minor.

## Christ College Courses

## The Freshman Program

| CC 110A | Texts and Contexts I: First Half Fall Semester <br> Critical reading, discussion, and writing about great works in religious, philosophical, and literary traditions. The <br> close reading of classic primary texts is accompanied by a survey of the wider aspects of the historical epoch or <br> milieu appropriate to each text. The course includes both plenary lectures and discussion seminars. The course is <br> graded S/U only, though advisory grades (A-F) are given throughout the course. |
| :--- | :--- |
| CC 110B | Texts and Contexts I: Second Half Fall Semester <br> A continuation of CC 110A. The course is graded S/U only, though advisory grades (A-F) are given throughout the <br> course. |
| CC 110L | Drama Workshop Fall Semester <br> Based on themes and ideas discovered in readings for CC 110, the CC first-year class creates, stages, and performs <br> an original play with music. Participation in the workshop is graded A-F. |
| CC 115A | Texts and Contexts II: First Half Spring Semester <br> Critical reading, discussion, and writing about great works in religious, philosophical, and literary traditions. The <br> close reading of classic primary texts is accompanied by a survey of the wider aspects of the historical epoch or <br> milieu appropriate to each text. The course includes both plenary lectures and discussion seminars. Graded A-F. |
| CC 115B | Texts and Contexts II: Writing Intensive - Second Half Spring Semester <br> Each student chooses from seminar topics offered by the program faculty. Each student conducts a major <br> investigation of a problem formulated within the seminar and completes a substantive research paper as a final |
| project. Graded A-F. |  |
| CC 115L | Debate Workshop Spring Semester <br> The CC first-year class divides into teams to research, explain, and argue for and against propositions concerning <br> significant current international, national, regional, and campus issues in Oxford-style debates. Participation in the <br> debate workshop is graded A-F. |

## Sophomore-Junior-Senior Curriculum

| CC 201 | Christ College Symposium 0 Cr. |
| :---: | :---: |
|  | Presentations and discussions of items and topics of special interest to members of the Christ College community. Christ College sophomores, juniors, and seniors are expected to register for the course and to attend each gathering except in cases of irresolvable conflicts. Only Christ College members may register for the course, but all students are welcome to attend. S/U grade. |
| CC 205 | Word and Image 3 Cr. |
|  | A study of selected literary, philosophical, and religious texts, with special emphasis on the relationship of these texts to works of art. These classic texts are read, analyzed, and discussed in seminar settings, supplemented by a weekly plenary session devoted to lectures and discussions of visual images. Prerequisites: CC 115 or CORE 115 and membership in Christ College or consent of the dean. |
| CC 215 | The Christian Tradition 3 Cr. |
|  | A study of one or more major topics in the history of Christian thought, with attention to the ways that these topics have been addressed by the Scriptures, classics in theological discourse, and other significant writings. Prerequisites: CC 115 or CORE 115 and membership in Christ College or consent of the dean. Some sections of this course may be used to fulfill the Writing Intensive General Education Requirement. |
| CC 255 | Interpretation: Self, Culture, and Society 3 Cr. |
|  | A study of principles of interpretation in the social sciences and relevant classic texts and theories. The course examines some basic interpretive problems using selected areas such as psychology, social theory, literature, anthropology, and history. Prerequisite: CC 115 or CORE 115 and membership in Christ College or consent of the dean. |

Each semester Christ College offers seminars dealing with themes of social, intellectual, cultural, spiritual, or artistic importance. These courses are often interdisciplinary in nature. Seminars may be cross-listed with academic departments in other colleges of the University. Seminars may be focused on topics, historical periods, or persons, but are not limited to these designations. Recent seminar titles include: Literature at the Movies; The Scientific Endeavor; Consumer Culture; Media and Culture in East Asia; Human Rights: Politics, Ethics, Law; Abraham Lincoln and the Civil War; American Identities; The Devil and the Problem of Evil; Theology and Literature; Object, Ritual, Discourse; World Christianity; Medical Missions; Faith and Healing. CC 300 may be repeated with different seminar topics. Prerequisite: membership in Christ College or consent of the dean.
Seminar
3-4 Cr.
Same as CC 300, except the course may be intensified to 4 credits with the consent of the instructor. A student who takes the course for 4 credits will prepare an honors thesis on some aspect of the seminar topic in place of one of the regularly assigned papers and the final examination. As a general rule only students with junior or senior standing will be permitted to intensify this course. Prerequisite: membership in Christ College or consent of the dean.
Inquiry in the Liberal Arts
3 Cr .
A course in the theory and practice of the liberal arts. Students in this course collaborate with instructors as tutorial assistants in CC 110. Prerequisites: CC 110 or CC 115, membership in Christ College, and consent of the dean.
A special independent study project arranged with a member of the faculty. Approval of this project must be obtained from the faculty prior to registration. Prerequisite: membership in Christ College and consent of the dean.
Senior Colloquium
1 Cr .
A capstone, integrative experience for seniors under the direction of Christ College faculty in which students give shape to the substance of their lives through autobiographical narrative, and reflect upon the character and meaning of their future work. Prerequisite: senior standing, membership in Christ College, and consent of the dean.

## College of Business

# Dean James D. Brodzinski, Ph.D. Assistant Dean Toni M. Spaliaras, M.B.A. 

Professors Boyt, Brodzinski, Gingerich, Jin, Ozgur, Pinar, Schroeder; Associate Professors Kumar, Liu, Stück, Trapp, Wilder; Assistant Professors Jha, Karaatli, Lewis, Li, Luth, Trendowski; Lecturers Guydan, Steele, Ward.

The College of Business offers a Bachelor of Science in Business Administration with majors in accounting, business analytics, finance, international business, management, and marketing. In addition, the college offers several graduate programs including a Master's in Business Administration (see the Valparaiso University Graduate Catalog for details and descriptions).

## Accreditation

The college's degree programs are fully accredited by AACSB International. AACSB is recognized by the Commission on Recognition of Post-Secondary Accreditation as the sole accrediting agency for degree programs in business administration and accounting.

## Mission

The mission of the College of Business is to cultivate values-based leaders in a dynamic and global environment. The general education curriculum exposes each student to a broad range of disciplines, problem solving techniques, and methods of inquiry. The business curriculum introduces students to concepts, tools of analysis, and techniques of evaluation which further develop skills in problem solving and decision making. These serve as a foundation for their growth into competent and ethically responsible business persons prepared for work in the global environment. The undergraduate education in business is concerned not only with preparation for business careers but with preparation for life in general. As the shared values indicate, "We view students as whole persons and strive to prepare them for personal, as well as professional success."

## The Major Field

The business core provides background in the production and marketing of goods and/or services and the financing of the business enterprise; it builds on the knowledge gained in the general education component. The student becomes familiar with accounting and quantitative methods that have application to the solution of business problems. Attention is given to ethical and social issues that confront modern business organizations within an integrative, capstone, policy-determination course. In addition to taking certain prescribed courses in the core, the student must complete the requirements for the major in accounting, business analytics, finance, international business, management, or marketing for the degree in business administration. The requirements for each major are set forth in the curricula described beginning on page 299.

The undergraduate degree requires that the students devote at least one-half of their time to required and elective courses outside the College of Business.

## Minor in Business Administration

The College offers this minor for non-business students who desire a more advanced preparation in business than is provided by the Fundamentals of Business Minor. For more information and the requirements of these two minors, see page 370 for the Minor in Business Administration and page 371 for the Fundamentals of Business Minor.

## Minor in Business Analytics

The college offers this minor to all Valparaiso University students who want to enhance their skills through the effective use of data. For more information and the requirements of this minor, see page370.

## Minor in Entrepreneurship

The college offers this minor to all Valparaiso University students who want to acquire an understanding of the venture creation process including how to generate and develop a new business concept, apply quantitative and qualitative methods and analytical tools to identify and evaluate entrepreneurial opportunities, use data and analysis to create and evaluate a business plan, and evaluate different funding sources for a new venture. For more information and requirements of this minor, see page 302.

## Credit by Examination

Credit through the College Level Examination Program (CLEP) can be earned for the following courses:

- For ACC 205 with the subject examination in Financial Accounting.
- For BLAW 104 with the subject examination in Introductory Business Law.
- For non- business majors only: MGT 304 with the subject examination Principles of Management.
- For non-business majors only: MKT 304 with the subject examination Principles of Marketing.


## Minors/Certificates for Business Students

In addition to minors in programs outside the College of Business, business students may complete the requirements for an interdisciplinary minor either in International Business and Global Studies (available to business students only, see page 302), or in Business Analytics (see page 370). In addition, business students may pursue one of the two minors in the Reserve Officer Training Core - Military Leadership: Air Force Minor or Military Leadership: Army Minor (see page 384). Business students may also pursue the Certificate in Business Spanish to communicate to employers their ability to converse with Hispanic customers, employees, and/or managers; see page 304 for a description and requirements for this certificate.

A business student may declare a minor in the College of Arts and Sciences. No more than two courses of specified nonbusiness courses required for a College of Business degree may be used in fulfilling the requirements of a minor except for interdisciplinary minors, the minor in mathematics, and the minor in computer science where three courses may be used to simultaneously satisfy the requirements of the major and the minor. Students must earn a 2.25 grade point average in a minor for it to be noted on the student's official academic record.

## Honors College

The College of Business encourages those students who are qualified to participate in the Christ College Honors program. Business students enrolled in Christ College also have an advisor in Christ College. A College of Business student in Christ College may graduate as a Christ College Scholar (see page 289).

## Double Major in the College of Business

Students may earn a double major by completing all the requirements for two majors. No course used to fulfill the requirements for one major (including major field requirements) may be used to fulfill requirements for a second major, unless the course is required for both majors or the course fulfills the international business requirement for each major. There cannot, however, be any more than a seven credit overlap between the two majors.

## Double Degree

Students may earn double degrees by earning 30 credits and 60 quality points in excess of the total number of semester credits required for the first degree and, in addition, must fulfill all the specific course requirements for the second degree. None of the additional 30 credits for the second degree may be used to fulfill requirements for the first degree.

## Enhanced International Business in German (EIB-German)

EIB-German is a nine-semester program that combines a major in International Business, a major in German, and one academic year of study and work in Germany. The program allows students to gain linguistic and cultural proficiency in the German language and prepares them for careers with German or US companies that operate globally. Students fulfill all requirements for both majors; participate in VU's study abroad program in Reutlingen, Germany, in the seventh semester; enroll in at least two German-language business courses while in Reutlingen; work in a cooperative-education placement in Germany during the eighth semester and ensuing summer; return to campus for the capstone ninth semester; and reside in the Kade-Duesenberg German House and Cultural Center for at least two semesters. EIB-German is coordinated jointly by the College of Business and the German section of the Department of Foreign Languages and Literatures. Students who wish to enroll in EIB-German should see their business advisor and a German instructor as early as possible.

## Assessment Center

The CoB Assessment Center is not a place, but an event. It evaluates each student in the major soft skills of business management. Students are assessed on their problem solving, communication, leadership, teamwork, and interpersonal skills. Students receive individualized results. The College uses group results to assess the business curriculum.

For freshman and transfer students, the Assessment Center is offered as a lab to BUS 100, required of all incoming students. For senior students, the Assessment Center is required as a lab to the capstone course MGT 475. A $\$ 60-70$ fee is required of all students, per lab, to be paid to the Collegiate Assessment Partners, who administer the materials and results.

## Cooperative Education

Cooperative Education in the College of Business is a program in which students combine full-time, professional, paid work experience with academic coursework. Employment may occur in a business, not-for-profit, or government setting. Each student is required to complete a Cooperative Education (or Internship; see following section) experience during their junior or senior year. The following policies govern Cooperative Education within the College of Business:

1. A student may participate in Cooperative Education after achieving junior standing with a minimum cumulative grade point average of 2.25.
2. A student works under the advisement of the CoB's advising and practical experience coordinator, who monitors the work experience, evaluates the required written journal and oral presentation, and assigns the course grade taking into account the employer's evaluation of the co-op student.
3. Placements require prior approval of both the CoB advising and practical experience coordinator and the director of the Career Center. Interested students should meet with the coordinator early in their academic careers.
4. A student registers for two credits for each co-op experience.
5. Retroactive credit will not be granted.

## Internships

Internships enable students to apply concepts and skills learned in their business courses to situations encountered in actual organizational settings. Each student is required to complete an Internship (or Cooperative Education; see previous section) experience during their junior or senior year. The following policies govern Internships within the College of Business:

1. A student may participate in Internships after achieving junior standing with a minimum cumulative grade point average of 2.25 .
2. A student works under the advisement of the CoB's advising and practical experience coordinator, who monitors the work experience, evaluates the required written journal, and assigns the course grade taking into account the employer's evaluation of the interning student.
3. Placements require the prior approval of the CoB advising and practical experience coordinator. Students should meet with the coordinator early in their academic careers.
4. Internships may be paid or unpaid work experiences.
5. A minimum of 100 hours of work experience during each internship placement is required to receive academic credit for the internship. A student registers for a total of one credit for each internship placement.
6. Retroactive credit will not be granted.

## Admission

The general requirements for admission to the University and to the college are found beginning on page 398 of this catalog.

## Transfers

Students currently enrolled at Valparaiso University and wishing to transfer into the College of Business, as well as those from other universities who wish to enter, must have a minimum cumulative grade point average of 2.25 . Transfer students should refer to page 405 regarding theology requirements and to page 12 for the First Year Core requirement.

Business courses completed by transfer students may or may not fulfill major requirements. Evaluation of such credit is made by the dean and may be articulated as elective credit only. Any course work completed at other colleges or universities with a grade lower than C- does not transfer. At least fifty percent of the business credit hours required for the business degree must be taken at Valparaiso University.

## Residence Requirements

In addition to the general residence requirements specified by the University for all bachelor's degree programs (see page 415), all candidates for baccalaureate degrees from the College of Business must satisfy the following residence requirements:

1. At least one-half of the number of total combined credit hours required for the Business Core and declared Business Major must be taken in residence.
2. At least one-half of the number of total credit hours required for the declared major must be taken in residence.

## Progression Standards

The College of Business requires each student to maintain a minimum University cumulative grade point average of 2.25 , a minimum business cumulative grade point average of 2.25 , and a minimum major or minor cumulative grade point average of 2.25 . Courses to be included in the business grade point average are those identified with the prefix ACC, BLAW, BUS, ENT, FIN, IDS, MGT, or MKT. Courses to be included in the major grade point average are those specifically identified under the major. Students must earn a grade of C - or better in all business prefix courses in order to graduate.

1. A student shall receive a Letter of Academic Deficiency at the end of the first semester in which he or she has a grade point average of less than 2.25 in either overall cumulative, business cumulative, or major cumulative.
2. A student shall be placed on college probation if he or she had a grade point average of less than 2.25 in either overall cumulative, business cumulative, or major or minor cumulative and the student has received a Letter of Academic Deficiency within the last two regular semesters.
3. A student shall be suspended from the college for at least one semester if he or she has a grade point average of less than 2.25 in overall cumulative, business cumulative, or major or minor cumulative and the student has been placed on probation within the last two regular semesters.
4. A suspended student will not be allowed to enroll in courses within the college except repeated courses to raise the business and/or major grade point average(s), provided he or she meets the course prerequisites. A suspended student must wait a minimum of one semester to apply for readmission to the College of Business. In order to be readmitted to the college after suspension, the student must have a minimum University cumulative grade point average of 2.25, a minimum business cumulative grade point average of 2.25 , and a minimum major or minor cumulative grade point average of 2.25 . A student suspended from the College of Business may apply for admission to another college within the University. A copy of all deficiency, probation, and suspension letters shall be placed in the student's folder and a copy given to his or her advisor.
5. If a student's overall cumulative grade point average falls below 1.00 during any semester, the dean of the College of Business will evaluate the student's situation to determine if the student should continue in the college (under deficiency or probation) or be suspended immediately.

## Graduation Requirements

To be eligible for the Bachelor of Science in Business Administration degree, a student must complete one of the prescribed curricula found on the following pages. The student must also satisfy the grade point requirements stated above and must meet all additional requirements for graduation established by the University (see the Graduation section beginning on page 417).

## S/U Grading Option

Business students may not take business courses required for their business degree or declared business major using the S/U grade option, unless

1. the course is only graded on the $\mathrm{S} / \mathrm{U}$ basis, or
2. the course is a free elective that is not from the student's declared business major.

The S/U option is not permitted in the nonbusiness courses of ECON 221, ECON 222, and ECON 223, PHIL 145/245, PSY 110 and PSY 111, the economics and foreign language requirements for the International Business major and International Business and Global Studies (IBGS) minor and any nonbusiness course used in the Applied Statistics minor or the Certificate in Business Spanish. See page 411 for the University guidelines for the $S / U$ grading option.

## Course Intensification Option

Any junior or senior student in good standing with a business grade point average of 2.70 or above may enhance one course in the major or a major field requirement for one additional credit. The general procedures for filing for course intensification are found on page 411.

## Advisement

Advisement of students admitted to the college is under the direction of the academic advisor, who assists freshmen through seniors in selecting courses and interpreting the requirements for an orderly progression toward a degree. It is each student's responsibility to know curriculum requirements, prerequisites for courses, academic policies and procedures, and deadline dates.

## Student Organizations

Students are encouraged to join one or more of the following College of Business organizations.

## Kappa Phi Chapter of Delta Sigma Pi

This selective professional business fraternity of men and women worldwide has been organized to foster the study of business in universities, encourage scholarship and social activity, and to promote closer affiliation between the commercial world and students of business.

## Future Business Leaders of America/Phi Beta Lambda

Phi Beta Lambda is the postsecondary nonprofit education association dedicated to preparing students for careers in business and business-related fields. FBLA-PBL's National Awards Program recognizes and rewards excellence in a broad range of business and career-related areas. Through state-based competition at the spring State Leadership Conferences, students compete in events testing their business knowledge and skills. Top state winners then are eligible to compete for honors at the National Leadership Conference each summer.

## Financial Management Association

The FMA was created in order to give students the opportunity to apply their knowledge and sharpen their skills in finance related fields. This will allow the students to work on their skills in an environment where the costs of mistakes are low, and where they will receive equal support for their growth in addition to their performance.

## Honor Societies

## Beta Gamma Sigma

Beta Gamma Sigma is a national honor society which recognizes outstanding academic achievements of students in AACSB accredited business programs. The upper ten percent of the senior class and the upper seven percent of the junior class are invited into its membership. Members are entitled to wear blue and gold honor cords at commencement.

## Decision Sciences and Information Systems Honor Society-Alpha Iota Delta

Sponsored by the Decision Science Institute to recognize academic excellence in the field of decision sciences and information systems.

| General Education |  |  |
| :---: | :---: | :---: |
| Freshman Core Program |  | 10 Cr . |
| CORE 110 | The Human Experience | 5 Cr . |
| CORE 115 | The Human Experience | 5 Cr . |
| Theology |  | 3 Cr . |
| THEO 200 | The Christian Tradition | 3 Cr . |
| Writing Intensive | Course | 3 Cr . |
| Cultural Diversity |  | 11 Cr . |
| Foreign Langu | uage | 8 Cr . |
| One of the following options: |  |  |
| Courses numbered 102 and 203 in a foreign language in which the student has more than one year of high school credit |  |  |
| Courses numbered 101 and 102 in a foreign language which the student has not taken before |  |  |
| For nonimmigrant visa international students whose native language is not English, there is no foreign language requirement providing they have completed ENGL 200: Literary Studies |  |  |
| Cultural Dive | rsity Course | 3 Cr . |
| One of the following options: |  |  |
| Three-credit course from a specified list of approved diversity courses |  |  |
| Semester abroad in one of the International Study Programs, the Chicago Urban Studies Semester, or the Washington Semester Program |  |  |
| Humanities |  | 3 Cr . |
| One course from the following options: |  |  |
| Fine and Performing Arts |  |  |
| History |  |  |
| Literature |  |  |
| Philosophy (except PHIL 145/245) |  |  |
| Social Science |  | 3 Cr . |
| Choose one three-credit course from geography (designated), political science and international relations, social work (designated), sociology, or gender studies (Note 4) |  |  |
| Natural Science |  | 7-8 Cr. |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 111 | Laboratory in General Experimental Psychology | 0+2.5, 1 Cr . |
| At least thr geography, | ee credits with a laboratory component from astronomy, biology, chemistry, physical meteorology, physics, or natural science | 3-4 Cr. |
| Quantitative Anal | lysis | 4 Cr . |
| MATH 124 | Finite Mathematics | 4 Cr . |
| Healthy Lifestyles |  | 1 Cr . |
| One of the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| PHIL 145 | Elementary Logical and Critical Thinking | 3 Cr . |
| ECON 221 | Principles of Microeconomics | 3 Cr . |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| ENGL 210 | Introduction to Business and Professional Writing | 3 Cr . |
| Total General Edu | ucation | 57-58 Cr. |


| Business Core |  |  |
| :---: | :---: | :---: |
| Freshman/Sophomore Core Courses |  |  |
| BUS 100 | The Business Experience | 3 Cr . |
| BUS 100L | The Business Experience Lab | 0 Cr . |
| BLAW 104 | Legal Environment of Business | 3 Cr . |
| ACC 205 | Financial Accounting | 3 Cr . |
| ACC 206 | Managerial Accounting | 3 Cr . |
| IDS 115 | Business Applications for Decision-Making | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| Total |  | 18 Cr . |
| Junior/Senior Core Courses |  |  |
| FIN 304 | Financial Management | 3 Cr . |
| MGT 304 | Management and Organizational Behavior | 3 Cr . |
| MGT 305 | Business Ethics | 3 Cr . |
| MKT 304 | Marketing Management | 3 Cr . |
| IDS 306 | Global Operations and Supply Chain Management | 3 Cr . |
| IDS 310 | Introduction to Business Analytics | 3 Cr . |
| One course from the following options: |  |  |
| MGT 395 | Internship Experience in Business Administration I | 1 Cr . |
| MGT 381 | Cooperative Education in Business Administration I | 2 Cr . |
| MGT 475 | Business Policy and Strategy | 3 Cr . |
| MGT 475L | Business Policy and Strategy Lab | 0 Cr . |
| Total |  | 22-23 Cr. |
| Total Business Core |  | 40-41 Cr. |

## Notes:

1. The free electives in the B.S.B.A. degree for the majors of Accounting, Business Analytics, Finance, International Business, Management, and Marketing vary depending upon whether the student takes a 3 or 4 credit natural science course (with lab). If a student takes a 3 credit natural science with lab, then the student has the greater value for free electives; if a student takes a 4 credit natural science with lab, then the student has the lesser value for free electives. The free electives by majors are Accounting: 4 or 5 credits, Business Analytics: 6 credits; Finance: 6 or 7 credits; International Business: 4 or 5 credits; Management: 7 or 8 credits; Marketing: 7 or 8 credits.
2. No more than six credits combined from performance music, ensemble music, and KIN 100-149 may be applied toward a degree; one credit is applied directly to KIN 100, up to three credits can be applied toward the Humanities Fine and Performing Arts, and any excess credits are applied as free electives.
3. No more than six credits from cooperative education and/or internship may be applied toward the degree; two credits are applied directly to cooperative education and/or internship requirement and any excess credits are applied as free electives.
4. Courses in economics do not satisfy the social science requirement in the College of Business.

## Bachelor of Science in Business Administration

Students who choose the Business Administration degree may select from six majors: Accounting, Business Analytics, Finance, International Business, Management, or Marketing.

| Accounting Major |  |  |
| :---: | :---: | :---: |
| ACC 310 | Intermediate Financial Accounting I | 3 Cr . |
| ACC 311 | Intermediate Financial Accounting II | 3 Cr . |
| ACC 315 | Accounting Information Systems | 3 Cr . |
| ACC 320 | Cost Accounting | 3 Cr . |
| ACC 350 | Concepts of Taxation I | 3 Cr . |
| ACC 413 | Auditing and Assurance Services | 3 Cr . |
| ACC 430 | Research and Analysis in Accounting | 3 Cr . |
| One course from the following options: |  |  |
| ACC 316 | Governmental and Not-for-Profit Accounting | 3 Cr . |
| ACC 411 | Advanced Accounting | 3 Cr . |
| ACC 412 | Concepts of Taxation II | 3 Cr . |
| International Business Requirement |  |  |
| One course from the following options: |  |  |
| FIN 430 | International Finance | 3 Cr . |
| MGT 440 | Cross-Cultural Management | 3 Cr . |
| MKT 430 | International Marketing | 3 Cr . |
| Total |  | 27 Cr . |
| Free Electives (Notes 1, 2, and 3) |  | 3 Cr . |
| Grand Total |  | 125 Cr . |
| Business Analytics Major |  |  |
| BUS 315 | Spreadsheet Modeling | 3 Cr . |
| BUS 330 | Database Management | 3 Cr . |
| IDS 340 | Statistics for Decision Making | 3 Cr . |
| BUS 370 | Visual Effects | 3 Cr . |
| BUS 440 | Data Mining | 3 Cr . |
| BUS 470 | Business Analytics Practicum | 3 Cr . |
| Total |  | 18 Cr . |
| Major field requirement |  | 6 Cr . |
| Two non-core business courses numbered above 300 |  |  |
| Free Electives (Notes 1, 2, and 3) |  | 6 Cr. |
| Grand Total |  | 125 Cr . |
| Finance Major |  |  |
| IDS 340 Stati | s for Decision Making | 3 Cr . |
| FIN 330 Finan | I Systems and Institutions | 3 Cr . |
| FIN 410 Theo | of Corporate Finance | 3 Cr . |
| FIN 420 Inves | ent Management | 3 Cr . |
| FIN 430 Inter | ional Finance | 3 Cr . |
| FIN 470 Finan | Strategy and Policy | 3 Cr . |
| Total |  | 18 Cr . |
| Major field requirement |  | 6 Cr . |
| Two non-core business courses numbered above 300 |  |  |
| Free electives (Notes 1, 2 and 3) |  | 6 Cr . |
| Grand Total |  | 125 Cr . |


| International Business Major |  |  |
| :---: | :---: | :---: |
| FIN 430 | International Finance | 3 Cr . |
| MGT 440 | Cross-Cultural Management | 3 Cr . |
| MKT 430 | International Marketing | 3 Cr . |
| One course from the following options: |  |  |
| ECON 326 | International Marketing | 3 Cr . |
| ECON 336 | Economics of Developing Nations | 3 Cr . |
| MGT 471 | International Business Environment and Global Strategy | 3 Cr . |
| Total |  | 15 Cr . |
| Major field requirement |  | 6 Cr . |
| Two non-core business courses numbered above 300 |  |  |
| A 300-level international economics course, not previously taken to meet the International Business requirements, may be selected to fulfill one of the two major field requirements. |  |  |
| Modern Foreign | Language: 203 or higher | 6 Cr. |
| OR for international students with English as a second language, TOEFL scores that satisfy University standards |  |  |
| OR for students with English as a second language, completion of a proficiency test in an approved modern foreign language |  |  |
| Free electives (Notes 1, 2, and 3) |  | 4-5 Cr. |
| Grand Total |  | 125 Cr. |

An international study semester is required unless the student has had a minimum of six consecutive months of nonU.S./Canada residency after fourteen years of age.

| Management Major |  |  |
| :---: | :---: | :---: |
| MGT 310 | Managing Human Resources | 3 Cr . |
| MGT 315 | Leadership and Interpersonal Skills | 3 Cr . |
| MGT 425 | Managing Technology and Change | 3 Cr . |
| International Business Requirement |  |  |
| MGT 440 | Cross-Cultural Management | 3 Cr . |
| MGT 470 | High Performance Organizations | 3 Cr . |
| Total |  | 15 Cr . |
| Major field req | ment | 9 Cr . |
| Three non-core business courses numbered above 300 |  |  |
| Free electives (Notes 1, 2, and 3) |  | 7 Cr . |
| Grand Total |  | 125 Cr . |
| Marketing Major |  |  |
| IDS 340 | Statistics for Decision Making | 3 Cr . |
| MKT 310 | Marketing Research | 3 Cr . |
| MKT 320 | Sales Management | 3 Cr . |
| MKT 330 | Buyer Behavior | 3 Cr . |
| International Business Requirement |  |  |
| MKT 430 | International Marketing | 3 Cr . |
| MKT 470 | Marketing Strategy and Policy | 3 Cr . |
| Total |  | 18 Cr . |
| Major field req | ment | 6 Cr . |
| Two non-core business courses numbered above 300 |  |  |
| Free electives (Notes 1, 2, and 3) |  | 7 Cr . |
| Grand Total |  | 125 Cr . |

## Entrepreneurship Minor

Entrepreneurship and the ability to recognize opportunities to create viable, sustainable solutions are skills needed across all disciplines. The Entrepreneurship minor gives students the opportunity to develop the mindset and behavior of successful entrepreneurs. Students explore the principles and concepts associated with entrepreneurship in startup, social, creative, and corporate endeavors. This minor complements majors in all of Valparaiso University's academic colleges and schools and encourages the application of entrepreneurial concepts in support of students' passions. The minor affords students the chance to explore entrepreneurship as a career option and acquire the skills that can ensure success.

Students completing the minor will acquire an understanding of the venture creation process including how to generate and develop a new business concept, apply quantitative and qualitative methods and analytical tools to identify and evaluate entrepreneurial opportunities, use data and analysis to create and evaluate a business plan, and evaluate different funding sources for a new venture. A critical element of the program is an entrepreneurship consulting opportunity in which students conduct an audit of an existing entrepreneurial firm in the local community.

Upon completion of the minor in Entrepreneurship, students will be able to:

1. Demonstrate an understanding of the role of entrepreneurship in the contemporary global business environment.
2. Identify, analyze, and evaluate viable entrepreneurial opportunities that create value in an ethical manner.
3. Assess the risk and reward associated with each opportunity.
4. Demonstrate an ability to work collaboratively in entrepreneurial contexts.
5. Communicate effectively about themselves and their ideas.
6. Construct a sustainable business model and identify the appropriate resources to pursue it.

| Required Courses |  |  |
| :---: | :---: | :---: |
| ENT 100 | Introduction to Entrepreneurship | 3 Cr . |
| ENT 200 | Creativity and Innovation | 3 Cr . |
| ENT 330 | Business Planning and Venture Finance | 3 Cr . |
| One course from the following options: |  |  |
| ENT 420 | Entrepreneurial Consulting | 3 Cr . |
| ENT 450 | Entrepreneurship and Product Development | 3 Cr . |
| ENT 470 | Entrepreneurship: Contemporary Issues and Challenges | 3 Cr . |
| Total |  | 15 Cr . |

## International Business and Global Studies Minor

## Administrative Committee: Associate Professor Stück, Assistant Professor Trapp. Intercollegiate Advisory Committee: Department Chairs of Economics, Foreign Languages and Literatures, Geography, History, and Political Science and International Relations.

The interdisciplinary minor in International Business and Global Studies is available to business students only. However, this minor is not available to International Business majors in the Bachelor of Science in Business Administration degree. It provides the opportunity for students to focus on the interdependent global environment in which business is conducted. The rapid global changes affecting the business world can best be understood through a cross-disciplinary approach involving the study of international business and economics as well as modern languages and selected courses from the liberal arts curriculum.

A total of 23 credit hours is required to complete the minor. However, the maximum hours can be reduced in this minor by applying up to a two-course overlap with other requirements within general education, a major, or a minor. In addition, students who complete the International Study Abroad Track within the International Elective Track will have the requirements reduced by six credit hours by studying abroad. In any case, there may not be more than a total of a two course overlap in this minor with other requirements, whether within general education or within a major or minor.

| Required Core Courses |  |  |
| :---: | :---: | :---: |
| Three courses from the following international business options: |  |  |
| FIN 430 In | International Finance | 3 Cr . |
| MGT 440 C | Cross-Cultural Management | 3 Cr . |
| MGT 471 In | International Business Environment and Global Strategy | 3 Cr . |
| MKT 430 In | International Marketing | 3 Cr . |
| Total |  | 9 Cr . |
| Modern Foreign Language Requirement |  |  |
| One of the following language sequences: |  |  |
| East Asian Region |  |  |
| FLJ 102 | Beginning Japanese II | 4 Cr . |
| FLJ 203 | Intermediate Japanese I | 4 Cr . |
| FLC 102 | Beginning Chinese II | 4 Cr . |
| FLC 203 | Intermediate Chinese I | 4 Cr . |
| EAST 109 | ) Intensive Elementary Chinese | 5 Cr . |
| EAST 110 | Intensive Elementary Chinese: Conversation | 5 Cr . |
| European Region |  |  |
| FLF 203 | Intermediate French | 4 Cr . |
| FLF 204 | French Composition and Conversation | 4 Cr . |
| FLGR 203 | 3 Intermediate German | 4 Cr . |
| FLGR 204 | 4 German Composition and Conversation | 4 Cr . |
| FLS 203 | Intermediate Spanish | 4 Cr . |
| FLS 204 | Spanish Composition and Conversation | 4 Cr . |
| Latin American Region |  |  |
| FLS 203 | Intermediate Spanish | 4 Cr . |
| FLS 204 | Spanish Composition and Conversation | 4 Cr . |
| General International Track |  |  |
| Two courses from any of the single-language sequences listed above |  |  |
|  |  |  |
| International Elective Tracks |  |  |
| One of the following tracks: |  |  |
| East Asian Region |  | 6 Cr. |
| Two courses from the following options: |  |  |
| GEO 301 | Regional Geographies of the World (Asia regional course) | 3 Cr . |
| HIST 140 | Introduction to East Asian Culture | 3 Cr . |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 342 | Tragedy and Triumph: The Making of Modern Japan | 3 Cr . |
| THEO 363 | 3 Religions of China and Japan | 3 Cr . |
| European Region |  | 6 Cr . |
| Two courses from the following options: |  |  |
| GEO 301 | Regional Geographies of the World (Europe regional course) | 3 Cr . |
| HIST 313 | History of Modern Britain | 3 Cr . |
| HIST 315 | Contemporary Europe: Century of Violence | 3 Cr . |
| Latin American Region |  | 6 Cr . |
| Two courses from the following options: |  |  |
| GEO 301 | Regional Geographies of the World (Latin America regional course) | 3 Cr . |
| HIST 232 | Latin American History and Society | 3 Cr . |
| HIST 329 | Revolution! Insurgence in Latin America | 3 Cr . |
| General Internatio | onal Track | 6 Cr. |
| One course from two of the following groups: |  |  |
| GEO 101 | World Human Geography | 3 Cr . |
| GEO 102 | Globalization and Development | 3 Cr . |
| HIST 110 | The World in the Twentieth Century | 3 Cr . |
| POLS 130 | Comparative Politics | 3 Cr . |


| POLS 150 | International Relations | 3 Cr. |
| :---: | :---: | :---: |
| POLS 330 | Politics of Industrialized States | 3 Cr. |
| POLS 335 | Politics of Developing States | 3 Cr. |
| International Study Abroad Track | 0 Cr. |  |

Attendance at an approved Valparaiso University international study program, or an alternative international study program approved by the Administrative Committee

## Certificate in Business Spanish

## Objective

This certificate program is designed to provide business students with the needed knowledge to be able to converse in Spanish with business people who are from Hispanic backgrounds. The special feature of this program is a course that will prepare students for potential business situations they might encounter with Hispanic customers, employees, and managers.

## Certificate in Business Spanish (Minimum 14 Cr.)

Admission to one of the following programs is required prior to declaring this certificate: all Business Administration majors and minors (including the Fundamentals of Business Minor), International Economics and Cultural Affairs majors, Economics majors and minors, Actuarial Science majors or minors, Sports Management majors, and Music Industry majors. A minimum of 14 credit hours is required to complete this certificate.

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| FLS 204 | Spanish Composition and Conversation | 4 Cr . |
| FLS 306 | Contemporary Hispanic Society through Communications | 3 Cr . |
| One course from the following options: |  |  |
| FLS 230 | Spanish Civilization | 4 Cr . |
| FLS 231 | Spanish-American Civilization | 4 Cr . |
| FLS 307 | Professional Spanish | 3 Cr . |
| MGT 335 | Spanish Communication in Business Transactions | 3 Cr . |

A minimum grade point average of 3.0 is required in the certificate with no less than a grade of B-in any of the courses.
Although not required, candidates for this certificate are strongly encouraged to participate in the University's study abroad centers in Granada, Spain and/or Puebla, Mexico or to seek an equivalent learning experience preapproved by the College of Business in another Spanish-speaking country. Candidates for the certificate must complete at least one-half of the credits, including MGT 335, at Valparaiso University. There cannot be more than a two course overlap with any other major or minor to earn the certificate.

## Business Courses

In order to enroll in CoB courses numbered above 304, a student must have junior standing.

## Accounting Courses

ACC 205

ACC 206

ACC 290

## Financial Accounting

A study of basic accounting theory and practice, the nature of assets and equity, income measurement, and financial statement preparation. Prerequisites: MATH 111 or placement higher than MATH 111 on the math placement assessment, and sophomore standing.
Managerial Accounting
3 Cr .
A study of the analysis and use of accounting data to manage enterprises. Topics include cost-volume-profit relationships, decision analysis, budgeting, standard costing, segment reporting, and product costing methods. Prerequisite: ACC 205.

Topics in Accounting
1-3 Cr .
A detailed examination of selected topics pertinent to the field of accounting to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.

## ACC 310

ACC 311

ACC 315

## ACC 316

ACC 320

ACC 350

ACC 412

ACC 413

ACC 430

Intermediate Financial Accounting I
A study of the theoretical foundations underlying financial reporting, revenue recognition, the matching of expenses, and financial statement presentation, with a focus on asset measurement and income determination. Prerequisites: BLAW 104, ECON 221, ECON 222 or ECON 223, IDS 205, ACC 206, and completion or concurrent enrollment in IDS 115, and FIN 304.

Intermediate Financial Accounting II
A study of the theoretical foundations underlying financial reporting, revenue recognition, the matching of expenses, and financial statement presentation, with a focus on liability valuation, stockholders' equity, and selected financial reporting topics. Prerequisite: ACC 310.
Accounting Information Systems 3 Cr .
A study of the use, evaluation, and design of accounting information systems. Prerequisites: BLAW 104, ECON 221, ECON 222 or ECON 223, IDS 205, ACC 206, and completion of or concurrent enrollment in IDS 115.

Governmental and Not-For-Profit Accounting

## 3 Cr .

This course provides a focus on accounting systems and processes unique to noncommercial enterprises. Emphasis is placed on accounting, reporting, and analysis of organizations whose primary purpose is to provide services. The courses addresses the changing financial reporting environment in the non-for-profit sector of business as well as in government. Attention is given to issues both in external financial reporting and in managerial accounting analysis. Prerequisite: ACC 310.

Cost Accounting
3 Cr .
A study of the techniques used to accumulate, measure, plan, and control the costs of an organization's products and services. Prerequisites: BLAW 104, ECON 221, ECON 222 or ECON 223, IDS 205, ACC 206, and completion of or concurrent enrollment in IDS 115.

Concepts of Taxation I
3 Cr .
A study of taxation and its impact on business entities. The emphasis is primarily on the Internal Revenue Code and its implications when making business decisions. Prerequisite: ACC 205.
Topics in Accounting 1-3 Cr.
A detailed examination of selected topics pertinent to the field of accounting to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.
Advanced Accounting 3 Cr .
A study of generally accepted accounting principles as applied to partnerships, corporate consolidations, and international operations. Prerequisite: ACC 311.
Concepts of Taxation II 3 Cr.
An in depth study of taxation focusing primarily on compliance with the Internal Revenue Code. The emphasis will center on the taxation of individuals, corporations, and flow-through entities (especially partnerships and S-corporations). Prerequisite: ACC 350.

Auditing and Assurance Services
3 Cr.
A study of the independent accountant's assurance, attestation, and audit services. Topics include risk, evidence, standards, control, reports, liability, ethics, and the effect of regulation. Prerequisites: ACC 311 and ACC 315.

Research and Analysis in Accounting
3 Cr .
A study of the wide variety of resources available for research in accounting standards and analysis of accounting issues. This will be done through both a lecture format and hands-on problem solving. This course is designed to present both the materials necessary for research and the process for using them. Students will gain a knowledge base that they will be able to draw upon to both understand and use the resources available for accounting research and the analysis of accounting issues. Covers both print and, to the extent they are available, online sources.
(Also offered as LAW 432.) A study of the wide variety of resources required for federal tax research. This will be done through both a lecture format and hands-on problem solving. This course, as with all legal research courses, is designed to present both the materials necessary for research and the process for using them. Students will gain a knowledge base that they will be able to draw upon to both understand and use the resources of federal tax research. Covers both print and, to the extent they are available, online sources.

Topics in Accounting
$1-3 \mathrm{Cr}$.
A detailed examination of selected topics pertinent to the field of accounting to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.

An independent research effort. It requires approval of a research proposal by a member of the College faculty and the dean. May not be used as a substitute for a course which covers the proposed research area. Prerequisite: approved research proposal and permission of the dean.

## Business Law Courses

BLAW 104 Legal Environment of Business 3 Cr.
A study of the legal and regulatory climate that has a major impact on the operation of business entities. Attention is directed not only to legal but also to ethical issues confronting the manager in today's global economy. Prerequisite: completion of 12 credit hours.

BLAW 404
Business Law 3 Cr .
A study of various areas of the law that affect the commercial community. The scope of this course includes the law of contracts, sales, agency, business associations, and issues related to corporate social responsibility. Prerequisites: junior standing and BLAW 104.

## General Business Courses

| BUS 100 | The Business Experience 3 Cr . |
| :---: | :---: |
|  | This course provides students with an overview of today's business world, with a particular emphasis on values-based issues and perspectives. Students will learn to view a business not simply in terms of its financial performance, but also its social and environmental impacts. The course includes assessment and skills development components designed to help students improve some of the softer skills they will need for professional success. Students must also register for a corresponding lab of the course for assessment. |
| BUS 100L | The Business Experience Lab 0 Cr . |
|  | This lab will involve approximately one half-day of assessment activities. Students will participate in a series of exercises designed to evaluate their skill level in a variety of behavioral dimensions (e.g., communication, teamwork, problem-solving skills). Students will subsequently receive a personalized, detailed report. A $\$ 60-$ 70 fee is required of all students to be paid to Collegiate Assessment Partners, who administer the materials and results. |
| BUS 190 | Topics in Business 1-3 Cr . |
|  | A detailed examination of selected topics pertinent to business is to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered. |
| BUS 290 | Topics in Business 1-3 Cr . |
|  | A detailed examination of selected topics pertinent to business is to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered. |
| BUS 315 | Spreadsheet Modeling 3 Cr . |
|  | A study of the fundamentals of prescriptive analytics is offered with an emphasis on spreadsheet models. |
|  | Students will learn to analyze decisions and apply a sensitivity analysis to improve outcomes. Topics covered may include: simulation, optimization, managing risk, and decision trees. Students will also communicate their results in written and oral formats appropriate for a general audience. Prerequisites: IDS 115 and MATH 124. |

## BUS 320

Business Analytics Practicum 3 Cr.
This course is the culmination of the Business Analytics program. Students will learn about the role of Business Analytics in the firm. The course will be taught with an interdisciplinary view - accounting, finance, marketing, operations. Students will demonstrate their analytical thinking by using prerequisite skills and apply them to real-world problems. Students will be required to communicate their selected strategies in both a written and oral format that is acceptable to a specialist and also enables a non-specialist to understand the problem and respective recommendations. Prerequisites: BUS 440.

## Entrepreneurship Courses

ENT 100 Introduction to Entrepreneurship 3 Cr .
An interdisciplinary survey course covering all dimensions of starting and operating a new business venture. Students will analyze and investigate the current trends and opportunities in entrepreneurship. Topics include entrepreneurship theory, opportunity recognition, the entrepreneurial process, entrepreneurship in a corporate context, the characteristics of entrepreneurs, market assessment, and entrepreneurial careers.

ENT 200
Creativity and Innovation
3 Cr .

SAP Concepts, Configuration, and Management
3 Cr .
This course provides an in depth understanding of enterprise resources planning (ERP) systems, and addresses how integrated information systems improve business operations. Students will be studying concepts and receive practical experience on configuration of business processes using SAP ERP software.

Database Management Systems 3 Cr .
The study of computer based information systems which allow for the storage of data through functions such as creating, reading, updating, and deleting. A database management system reduces data redundancy, insures data integrity, and provides for data security. Topics include: multidimensional databases and data cubes, data types and data validation; data normalization and data extraction; entity relationships, and structured query language. Data storage and public sources of data will be discussed and software will be used to apply the concepts learned in class. Prerequisite: IDS 115 or consent of the instructor.

Visual Effects
3 Cr .
The focus of this course is to explore different techniques for presenting a business case for the purpose of making it meaningful to an audience. Students will learn the strengths and weaknesses of various options using data from different functional areas. Balanced scorecards, dashboards, and index numbers will be used to facilitate the learning experience. Prerequisites: junior standing.

Topics in Business
A detailed examination of selected topics pertinent to business is to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

SAP Finance and Controlling
3 Cr .
This course teaches the fundamentals needed to understand data integration across different departments and addresses how integrated information systems improve business operations. The course is heavily focused on the Financial and Controlling module of SAP. Prerequisite: BUS 320.

Data Mining
3 Cr.
Data Mining is the exploration and analysis of large quantities of data in order to discover meaningful patterns and rules. Structured and discovery approaches will be covered in this course. Students will also communicate their analyses in written and oral formats that are acceptable to specialists and non-specialists alike. Prerequisites: BUS 330, IDS 340.

An examination of the techniques and processes of innovation and creativity that lead to new business development as an independent new venture or in existing organizations. Exposure to techniques, concepts, and methods for managing the creative process in individual and group contexts with emphasis on accountability for creative quality. Lectures, experiential learning, discussions, and guest speakers.

Business Planning and Venture Finance
A survey course focusing on development of business plans and raising capital. The components of a business plan are covered, including the research process required to gather necessary information. Sources of seed and growth capital are covered, as well as financial challenges faced by the entrepreneur. Students develop a comprehensive business plan that is presented to a panel of entrepreneurs and bankers.

## Entrepreneurial Consulting

3 Cr .
An experiential learning course in which students conduct an audit of an existing entrepreneurial firm in the local community. Included in the audit is a holistic investigation of the firm's internal and external environments, including each of the functional areas. Students learn to integrate and apply their knowledge in "real world" settings and test their analytical skills by confronting and solving complex business problems. Suggestions for improvement are offered based upon findings.
Entrepreneurship and Product Development 3 Cr. An interdisciplinary perspective on the interfaces between new product development, innovation, and technology. Examines product development capability as an essential element of successful business strategy and a key component of an "entrepreneurial mindset." Students develop a working prototype for a new product and a comprehensive new product plan including a market assessment.

Entrepreneurship: Contemporary Issues and Challenges
3 Cr .
An integrative seminar designed as a capstone experience covering topics of current interest related to all aspects of entrepreneurship. The focus is on understanding through synthesis. Prerequisites: Senior Standing, ENT 100, ENT 330, and ENT 420 or ENT 450.

## Finance Courses

An overview of personal and family financial management with an emphasis on budgets, tax management, credit management, investment selection, insurance selection, retirement planning, and estate planning. Business majors may take this course only as a free elective. Prerequisite: sophomore standing.

FIN 290 Topics in Finance 1-3 Cr.
A detailed examination of selected topics pertinent to the field of finance to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

Financial Management
3 Cr .
A survey of the field of financial management. Major topics include the financial environment, financial statement analysis and forecasting, leverage, working capital management, assessment of risk, the time value of money, valuation of securities, and capital budgeting. Consideration is given to these topics as well as to ethical relationships among the firm's contract holders. Prerequisites: ACC 205, ECON 221, IDS 205, and completion of at least 48 credit hours.
FIN 330
Financial Systems and Institutions
3 Cr .
A study of the U.S. financial system and the management of financial institutions. Topics covered include financial markets, financial institutions, central banking, monetary policy, and financial market regulation. Prerequisites: FIN 304, and IDS 115 or CS 157.
FIN $390 \quad$ Topics in Finance $\quad 1-3 \mathrm{Cr}$.
A detailed examination of selected topics pertinent to the field of finance to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

FIN 410
Theory of Corporate Finance
3 Cr .
A study of the theory of corporate finance with emphasis on analytic and quantitative problem solving. Topics covered include risk measurement and management, the cost of capital, capital budgeting, capital structure and dividend policy, and valuation theory. Spreadsheets will be employed where applicable. Prerequisites: FIN 304, either IDS 115 or CS 157, and completion of or concurrent enrollment in IDS/STAT 340.

FIN 420

Independent Study in Finance
1-3 Cr.
An independent research effort. It requires approval of a research proposal by a member of the college faculty and the dean. May not be used as a substitute for a course which covers the proposed research area. Prerequisites: approved research proposal and permission of the dean.

## Information and Decision Sciences Courses

This course provides an introduction into business software applications used to integrate business processes and support decision-making. Topics introduced include data classification, data management, decision modeling, and analytics used in processing, organizing, analyzing, and communicating information to improve decision-making. The course uses current software applications and provides students the opportunity to gain software skills necessary to apply to business problems.

Business Statistics
A course in the elements of statistical inference and the application of statistical methods to business problems. Content includes descriptive statistics, discrete distributions, continuous distributions, sampling distributions, hypotheses tests, and regression analysis. Emphasis will be placed on framing, interpretation, and application of the statistical tools to business problems. Prerequisite: MATH 124.

A detailed examination of selected topics pertinent to the field of information and decision sciences to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

This course examines issues and methods for effectively managing global operations and supply chain. Topics include the role of operations in global strategy, processes, quality, capacity planning, facility layout and location, sourcing decisions, managing inventories for independent \& dependent demand, and lean production. Prerequisites: IDS 205.

IDS 310
Introduction to Business Analytics
3 Cr .
This course is intended to provide an overview of the field of business analytics and intelligence. The purpose and process of model building will be explained along with a variety of applications. Topics covered may include descriptive, predictive, and prescriptive analytics along with the role of big data and intelligence gathering. Prerequisites: IDS 115.

Management Science
3 Cr .
A study of fundamentals of management science techniques in decision-making process. The emphasis is on model building, problem formulation, and solution using linear programming, transportation, multi-criteria and network flow models, queuing theory, simulation, dynamic programming, and Markov processes. Prerequisites: one of IDS 205, STAT 140, STAT 240, MATH 264, or PSY 201.
Statistics for Decision Making
3 Cr .
(Also offered as STAT 340.) A study of statistical concepts and methods to facilitate decision making. Content includes analysis of variance, simple and multiple regression, correlation, time-series analysis, and nonparametric methods. Prerequisite: one of IDS 205, STAT 140, STAT 240, PSY 201, or CE 202. Not open to students who have completed STAT 340/540.

IDS 390
Topics in Information and Decision Sciences
1-3 Cr.
A detailed examination of selected topics pertinent to the field of information and decision sciences to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

IDS 490 Topics in Information and Decision Sciences 1-3 Cr. A detailed examination of selected topics pertinent to the field of information and decision sciences to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

IDS 495 Independent Study in Information and Decision Sciences 1-3 Cr.
An independent research effort that requires approval of a research proposal by a member of the college faculty and the dean. May not be used as a substitute for a course which covers the proposed research area. Prerequisites: approved research proposal and permission of the dean.

## Management Courses

MGT 190

MGT 290

MGT 304

MGT 305

MGT 310

Topics in Business
1-3 Cr.
A detailed examination of selected topics pertinent to the field of business to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.

Topics in Business
1-3 Cr.
A detailed examination of selected topics pertinent to the field of business to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.
Management and Organizational Behavior
3 Cr .
An overview of the traditional management functions: planning, organizing, leading, and controlling. Topics include competitive strategies, managing in a global environment, social responsibility, ethics, organizational design, qualitative decision making, and motivating employees. The course is designed to prepare students for more advanced courses in organizational management. Prerequisites: completion of at least 48 credit hours.

Business Ethics
3 Cr .
An analysis of the moral bases for ethical decisions and ethical aspects of behavior in business leadership. Contemporary business conduct is examined in an ethical context.

Managing Human Resources
3 Cr .
An introduction to the activities common to the field of human resource management, including human resource planning, job analysis, recruitment, selection, orientation and career development, compensation and benefits, health and safety, performance appraisal and discipline, training and development, and labor management relations. Prerequisite: completion of or concurrent enrollment in MGT 304.

## MGT 315

MGT 335

MGT 381

MGT 382

MGT 390

MGT 395

MGT 397

MGT 398

MGT 425

MGT 440
MGT 425

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Leadership and Interpersonal Skills
3 Cr .
Describes the natures, dynamics, and parameters of various leadership approaches, with emphasis being placed on contemporary models of leadership. Also examines the role of interpersonal skills in leader effectiveness. This course should assist future managers in developing the interpersonal skills they will need in different leadership roles. Prerequisite: MGT 304.

Spanish Communication in Business Transactions
3 Cr .
Course taught in Spanish to explore potential business situations and to imitate interaction with customers, employees, and managers. Capstone course for the Certificate in Business Spanish. This course may not be used to fulfill the upper business elective in a student's declared business major. Prerequisites: junior standing, completion of FLS 204 or FLS 306, FLS 230 or FLS 231, and FLS 307.

Cooperative Education in Business Administration I 2 Cr . The first of two sequential full-time, paid work experiences in which students apply their business knowledge, skills, and abilities in an actual organizational setting. This course requires a satisfactory supervisor evaluation and submission of a final written report in approved form. Prerequisites: junior standing and approval of both the CoB Internship and Assessment Center coordinator and the director of the Career Center. S/U grade.

Cooperative Education in Business Administration II
2 Cr .
The second of two sequential full-time, paid work experiences in which students apply their business knowledge, skills, and abilities in an actual organizational setting. This course requires a satisfactory supervisor evaluation and submission of a final written report in approved form. Prerequisites: completion of MGT 381 and approval of both the CoB Internship and Assessment Center coordinator and the director of the Career Center. S/U grade.

Topics in Business 1-3 Cr .
A detailed examination of selected topics pertinent to the field of business to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.

Internship Experience in Business Administration I
1 Cr .
Students apply their business knowledge, skills, and abilities in an actual organizational setting. Students keep a journal regarding their job experience while serving as an intern. Registration is in the semester of the actual work experience; students will secure an internship, and have the internship and related job description approved. Prerequisite: junior standing. S/U grade.
Internship in Business Administration II
2 Cr .
Second work experience in which students apply their business knowledge, skills, and abilities in an actual organizational setting. This course requires an approved job description, an evaluation from the employer and the internship coordinator, and submission of a final written report. Registration is in the semester of the actual work experience. Prerequisite: completion of MGT 395. S/U grade.

Internship in Business Administration III
2 Cr.
Third work experience in which students apply their business knowledge, skills, and abilities in an actual organizational setting. This course requires an approved job description, an evaluation from the employer and the internship coordinator, and a final written report. Registration is in the semester of the actual work experience. Prerequisite: completion of MGT 397. S/U grade.

Managing Technology and Change
3 Cr .
Focuses on managing change in today's highly dynamic organizational environments. The course explores approaches for managing technology, structure, work teams, and organizational culture within a sociotechnical systems theory framework. Prerequisites: MGT 304 and senior standing.

Cross-Cultural Management
This course focuses on the effect of national cultural value differences on the workplace. Leading empirical cross-cultural models are integrated and taught as analytical tools for understanding the effects of differing national cultural values on comparative management issues. Particular emphasis is on the development of skills in cross-cultural conflict avoidance, cross-cultural conflict resolution, and in managing international, multicultural teams and virtual/global networks. May be used to fulfill the Cultural Diversity course component of the General Education Requirements. Registration priority is given to CoB students. Prerequisite: junior standing.

MGT 470

MGT 471

MGT 475

MGT 475L

MGT 490

MGT 495

High Performance Organizations
3 Cr .
This course focuses on learning to create high performance organizations. The high performing organization is one that provides customers with optimum value, satisfies all stakeholders, and creates an environment where members know more, do more, and contribute more. The goal is to understand what separates the merely ordinary organization from the extraordinary one. Cutting edge theory and practice will be integrated throughout the course. Prerequisites: MGT 304 and senior standing.

International Business Environment and Global Strategy
3 Cr .
Capstone integrative course for the international business field. The course focuses on the strategic management of multinational operations within cross-border business environments, including the legal, political, trade, and information technology environmental factors. Prerequisites: senior standing, MGT 304, and one of the following: FIN 430, MGT 440, and MKT 430.
Business Policy and Strategy 3 Cr . Capstone business course. The development of the administrative perspective on management, including establishing and analyzing policy and strategy in various settings, as well as the relationships between administrative decision making and important social and ethical issues. Integrative approach uses case method to explore executive decision making in the global marketplace. Students must also register for a corresponding lab of the course for assessment. Prerequisites: final semester senior standing, FIN 304, IDS 306, MGT 304, and MKT 304.

Business Policy and Strategy Lab
0 Cr .
This lab will involve approximately one half day of assessment activities. Students will participate in a series of exercises, similar to those done during the freshman year in BUS 100L, designed to evaluate their skill level in a variety of behavioral dimensions (e.g. communication, teamwork, problem-solving skills). Students will then subsequently receive a personalized, detailed report. These results can then be used to assess the growth of the individual in their academic program. A $\$ 60-70$ fee is required of all students to be paid to Collegiate Assessment Partners, who administer the materials and results.

Topics in Business 1-3 Cr .
A detailed examination of selected topics pertinent to the field of business to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.
Independent Study in Business Administration 1-3 Cr.
An independent research effort. It requires approval of a research proposal by a member of the college faculty and the dean. May not be used as a substitute for a course which covers the proposed research area. Prerequisites: approved research proposal and permission of the dean.

## Marketing Courses

MKT 290

MKT 304

MKT 310

Topics in Marketing
1-3 Cr. A detailed examination of selected topics pertinent to the field of marketing to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

Marketing Management
3 Cr .
Emphasis is placed on the ethical application of marketing concepts, theories, and principles which relate to product policy, promotional mix decisions, distribution and logistical planning, and pricing. The international business environment, including social, cultural, economic, political-legal, competitive, and technological variables, is studied and compared with American markets. The areas of buyer analysis, the utilization of marketing information systems, and market planning and analysis are also stressed. Prerequisites: ACC 205, ECON 221, and completion of at least 48 credit hours.

Marketing Research
3 Cr .
A course designed to introduce the marketing student to the areas of marketing research and marketing information systems. Coverage of marketing information system design and the marketing research process, including: research design and sources of information, data collection methods, sampling procedures, data analysis and interpretation, and the formal research report. Prerequisites: MKT 304 and completion or concurrent enrollment in IDS 340.

## MKT 320

Sales Management
A study of the managerial functions of professional selling to the industrial or organizational buyer. An overview of organizational, economic, and psychological influences on the organization's buying decisions. Emphasis on field and territorial management, recruitment and training of the sales force, sales forecasting techniques, routing, and personal selling principles. Prerequisites: MKT 304 and completion or concurrent enrollment in IDS 340.

Buyer Behavior
3 Cr .
An analysis of the psychological, social, and economic influences which affect attitude formation and decisionmaking processes of consumers. An overview of the research methods used for determining characteristics of buyers is included. Prerequisite: MKT 304.
$\begin{array}{ll}\text { Retailing } & 3 \mathrm{Cr} \text {. }\end{array}$
A study of the contemporary environment of the retailing industry with emphasis on techniques utilized in store location, merchandising, promotion, and control. Prerequisites: junior standing and MKT 304.

Advertising 3 Cr .
An introductory level course taught from a marketing perspective. The areas of market analysis, campaign planning and strategy, media selection and design of advertisements are emphasized. The legal environment of advertising and the role of the different service institutions, such as advertising agencies, also are covered. Prerequisites: junior standing and MKT 304.

Topics in Marketing 1-3 Cr .
A detailed examination of selected topics pertinent to the field of marketing to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

International Marketing
3 Cr.
A study of managerial marketing policies and practices of organizations marketing their products and services in foreign countries. Specific stress will be placed on the relationship between marketing strategy, market structure, and environment. Prerequisite: MKT 304.
Marketing Strategy and Policy
Capstone marketing course primarily for students with a concentration in Marketing. It is taught from a marketing management perspective involving case analysis of product policy, pricing, distribution and promotional mix. Prerequisites: senior standing, MKT 304 and two of the following: IDS 340, MKT 310, MKT 320, MKT 330, and MKT 430.
Topics in Marketing 1-3 Cr.
A detailed examination of selected topics pertinent to the field of marketing to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

Independent Study in Marketing 1-3 Cr.
An independent research effort. It requires approval of a research proposal by a member of the college faculty and the dean. May not be used as a substitute for a course which covers the proposed research area. Prerequisites: approved research proposal and permission of the dean.

## Associate of Science with a Concentration in Aviation

This degree, consisting of 64 credits, includes 32 credits in general education and 32 credits in the Aviation concentration. Three credits are open electives. The degree leads to three Federal Aviation Administration (FAA) certifications and two FAA ratings. Note that in order to complete this degree, students must pass all five FAA certifications and ratings. The University is currently pursuing the necessary approvals from the FAA and the Higher Learning Commission and anticipates enrolling students in this program beginning in Fall 2017.

Students earning the Associate of Science in Aviation may choose to complete a baccalaureate degree in one of the other colleges/programs. For example, a student will be able to complete the BA in Liberal and Professional Studies in the equivalent of four years of full time enrollment. Students choosing a baccalaureate degree program in another college may, with careful planning, be able to complete the baccalaureate degree in the equivalent of four years of full time enrollment: however, some degrees such as engineering, nursing, and business may take longer.

The flight courses for this program are offered on site at Porter County Regional Airport through a partnership with Eagle Aircraft, a SEVIS-approved flight school.

## Admission to the Aviation Associate's Degree or Minor

Admission to any aspect of the Aviation Program requires admission to Valparaiso University and approval of the Director of Aviation and Chief Instructor. Students are required to obtain a FAA 2nd class medical certificate for admission (1st class is recommended). International Students will not be admitted for the first academic year of the program.

## Costs

University tuition covers the cost of ground school courses except for books and course packs. Students are responsible for flight course fees which include aircraft rental, fuel, and instructor pilot fees. Students will be expected to pay for estimated costs for each flight course in advance of attending the course based on best estimates. Those estimates may change because of variations in fuel costs, for example, and will be given to the student in advance. In addition, students will be required to purchase individual insurance and flight gear, e.g. headsets, navigation computer, etc.

## Advising

Students earning the Associate of Science degree or the minor are advised through the Director of Aviation and Chief Instructor. Registration for any AVN courses requires enrollment in the Aviation Associate's or minor program, and approval of the Director of Aviation and Chief Instructor.

## Federal Aviation Administration (FAA) Certificates and Ratings

Each certification or rating requires a written exam and flight test and, for all certificates and ratings other than the initial private pilot certification, a prior certification is required. Material for the written exam is covered in the Ground coursework. Flight instruction prepares students for the flight test.

| General Education |  |  |
| :---: | :---: | :---: |
| Freshman Core Program |  | 10 Cr . |
| CORE 110 | The Human Experience | 5 Cr . |
| CORE 115 | The Human Experience | 5 Cr . |
| Theology |  | 3 Cr . |
| THEO 200 | The Christian Tradition | 3 Cr . |
| Humanities |  | 3 Cr . |
| One course from the following options: |  |  |
| Fine and Performing Arts |  |  |
| History |  |  |
| Literature |  |  |
| Philosophy (except PHIL 145/245) |  |  |
| Social Science |  | 3 Cr. |
| Choose one three-credit course from geography (designated), political science and international relations, social work (designated), sociology, or gender studies |  |  |
| Natural Science |  | 8 Cr. |
| BIO 151 | Human Anatomy and Physiology I | $3+3,4 \mathrm{Cr}$. |
| BIO 152 | Human Anatomy and Physiology II | $3+3,4 \mathrm{Cr}$. |
| Quantitative Ana | ysis | 2 Cr . |
| MATH 115 | Trigonometry and Functions | 2 Cr. |
| Healthy Lifestyle |  | 1 Cr . |


| One of the following options: |  |  |
| :---: | :---: | :---: |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| Aviation Concentration |  | 32 Cr . |
| MET 103 | Introduction to Meteorology | 4 Cr . |
| AVN 101 | Air Transportation | 1 Cr . |
| AVN 121 | Private Pilot Airplane Ground | 3 Cr . |
| AVN 122 | Private Pilot Airplane Flight | 2 Cr . |
| AVN 221 | Instrument Airplane Ground | 3 Cr . |
| AVN 222 | Instrument Airplane Flight | 2 Cr . |
| AVN 321 | Commercial Airplane Ground | 3 Cr . |
| AVN 322 | Commercial Airplane Flight I | 2 Cr . |
| AVN 323 | Commercial Airplane Flight II | 2 Cr . |
| AVN 421 | Multi-Engine Ground | 3 Cr . |
| AVN 422 | Multi-Engine Flight | 2 Cr . |
| AVN 423 | Flight Instructor Ground | 3 Cr . |
| AVN 424 | Flight Instructor Flight | 2 Cr . |
| Total |  | 64 Cr . |

## Aviation Courses

AVN 101 Air Transportation 1 Cr.
Introduction to aviation. The course will cover the aviation industry, pathways to an aviation career, aviation history, and the role of aviation in both the U.S. and global economies. It will also include an overview of current thought on the future of aviation in human society and culture.

AVN 121 Private Pilot Airplane Ground 3 Cr.
This course provides a basic background in aerodynamics, aircraft systems, weather, air route traffic control procedures (including the Federal Aviation Regulations-FARs), airport operations, single-pilot resource management, risk management, procedural knowledge, navigation, and psychological/physiological aspects of flying an aircraft. The course also provides an introduction to instrumentation and automation. At the end of this course all students will be able to take the FAA Private Pilot Airplane Written Exam.

Private Pilot Airplane Flight
2 Cr .
Students learn to take off, maneuver, and land a fixed-wing single engine aircraft through the use of scenario and phase based training. Cross country flying is also covered. Successful completion of the course results in the student being certified by the FAA as a private pilot. This course is taught at Porter County Regional Airport by the certified staff of Eagle Aircraft.

Instrument Airplane Ground
3 Cr .
This course will cover: applicable FARs for instrument flight, information in the AIM (Aeronautical Information Manual), ATC (Air Traffic Control) system and procedures for IFR (Instrument Flight Rules) flight, IFR navigation and approaches, use of IFR enroute and approach procedure charts, advanced aviation weather (forecast, reports, phenomenon), medical factors, and operating an aircraft under IFR (decision making, crew resource management, communications and potential system failures). At the end of this course all students will be able to take the Instrument Airplane Written Exam.

Instrument Airplane Flight
2 Cr.
Students will learn to maneuver an aircraft under instrument flight conditions and rules (simulated and actual) from takeoff and enroute navigation to approach and landing. There are four stages to this course: Instrument flying skills, using navigation equipment, flying instrument approaches, and cross country flights. Successful completion of this course results in the FAA certifying the student as an instrument rated pilot. This course is taught at Porter County Regional Airport by the certified staff of Eagle Aircraft. Prerequisite: AVN 122.

## AVN 321

Commercial Airplane Ground
3 Cr .
This course will include: expanded coverage of aircraft aerodynamics and performance, advanced aircraft maneuvers, complex aircraft, FARs covering commercial aircraft operation, flight operations, and cross country planning and execution, and single/multicrew resource management. At the end of this course all students will be able to take the FAA Commercial Pilot Written Exam.

Commercial Airplane Flight I
2 Cr.
Flight experience will cover all aspects of commercial flight operations to include advanced aircraft maneuvers, flight planning and execution and operations within the air route traffic control system. This course is taught at the Porter Regional Airport by certified staff of Eagle Aircraft. Prerequisite: AVN 122 and AVN 222.

Commercial Airplane Flight II 2 Cr .
This course continues the work of AVN 322. To complete this course a student must earn the Commercial Pilot Certificate including a minimum of 190 hours of flight time. (Additional flight time may be required for the student to achieve the needed proficiency.) This course is taught at the Porter County Regional Airport by the certified staff of Eagle Aircraft. Prerequisite: AVN 322 and Chief Instructor approval.

Multi-Engine Ground
3 Cr .
This course will introduce the pilot to multi-engine aircraft and will include: multi-engine IFR operations, single engine operations in a multi-engine aircraft (including other emergencies and system failures), multiengine cross country flying, and single/multi-crew resource management. Prerequisite: AVN 122.

## Multi-Engine Flight

2 Cr .
Flight training will cover: multi-engine operations, single engine flight in a multi-engine aircraft, multi-engine instrument operations, and multi-engine cross country flight. To complete this course you must earn the Multi Engine Rating on either the Private or Commercial Pilot Certificate. This course is taught at the Porter County Regional Airport by the certified staff of Eagle Aircraft. Prerequisite: AVN 122.

Flight Instructor Ground
3 Cr.
This course will include: fundamentals of instruction and learning theory (e.g., the learning process, elements of effective teaching, evaluation, and others), aeronautical knowledge based on the flight instructor privileges being sought, and instrument procedures if seeking a CFII. This course will require you to teach all subjects previously learned for the Private and Commercial Pilot Certificates. At the end of this course all students will be able to take the Fundamentals of Instruction, and Flight Instructor Airplane Written Exams, present any topic as an instructor, and write lesson plans associated with known material. Prerequisite or corequisite of AVN 424.

Flight Instructor Flight
2 Cr .
This course will apply the Fundamentals of Instruction, teaching, and evaluating techniques learned in previous courses. Flight training will be conducted in accordance with FAR Part 61 section 187, depending on the category and class rating the student is attempting. In addition, the student will have at least 15 hours in the category and class of aircraft for which the rating is being sought. To complete this course a student must earn the Flight Instructor Certificate. This course is taught at the Porter County Regional Airport by the certified staff of Eagle Aircraft. Prerequisites: AVN 222 and prerequisite or co-requisite of AVN 423.

## College of Engineering



Dean Eric W. Johnson, Ph.D.

## Mission

The College of Engineering prepares and inspires talented students in a strong undergraduate environment to become servant leaders who apply scientific knowledge to benefit society. The College of Engineering accomplishes this mission by:

- offering rigorous curricula with a balance of theoretical and practical experience.
- promoting professional growth through leadership, scholarship, and work experiences.
- encouraging personal growth through service and outreach opportunities.
- fostering a learning environment that is technologically rich and culturally diverse.
- providing guidance from dedicated faculty mentors.


## Vision

The College of Engineering will be the premier engineering college emphasizing undergraduate education, acknowledged for the impact its students, faculty, staff, and graduates have in leading and serving society.

## Core Values ( $E^{5}$ ) <br> Exploration

We encourage creativity inside and outside the classroom. We provide opportunities for students, faculty, and staff to stretch the boundaries of their knowledge and explore uncommon solutions. We help students, faculty, and staff develop the skills necessary for discovery.

## Excellence

We strive for excellence in every activity. We cultivate an environment that fosters learning and critical thinking. We expect faculty, students, and staff to work each day to seek continuous improvement.

## Ethics

We are committed to a culture of honesty, respect, and fairness. We act in a professional and ethical manner in all that we do and say.

## Equality

We strive to create an environment that appreciates and values diversity, in all respects, without judgment.

## Enjoyment

We believe that potential cannot be achieved without enjoyment. We foster an environment where faculty, staff, and students enjoy their work and surroundings.

## Objectives

Engineering is the art of applying scientific and practical knowledge to the solution of problems for the benefit of society. The curriculum integrates scientific and engineering principles, practical laboratory and computer experiences, engineering design experiences culminating in a major design project, and liberal learning in the tradition of Christian church-related colleges and universities. Special emphasis is given to communication skills, the humanities, and the social sciences. Students are enriched by participation in the academic, social, cultural, and spiritual life that is central to the Christian academic tradition at Valparaiso University. Graduates are prepared both for direct entry into the practice of engineering and for graduate school.

## The Academic Programs

Bachelor of Science degrees may be earned in Bioengineering, Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering. The goals of these programs are to build a strong foundation in mathematics, the natural and engineering sciences, and to provide an introduction to engineering design during the early portion of these programs. This is followed by courses with increased emphasis on engineering applications, design, teamwork, and interdisciplinary activity. Instruction in engineering design is integrated throughout the curriculum so that students advance toward higher levels of competence culminating in a senior design project which emphasizes formulation of problem statements and criteria, consideration of alternatives, and communication of results.

The laboratory program provides for firsthand observation of physical phenomena, experience in data collection and analysis, verification of designs, written and oral communication, and teamwork. The use of computers in both the classroom and laboratory is fully integrated into the curriculum starting in the first semester.

## History

Civil engineering topics were taught at Valparaiso University beginning in 1859. Sisters Ethel and Merle McCall were the first women engineering graduates each receiving civil engineering degrees in 1915. Full four-year programs were established in 1920, with offerings in Civil, Electrical, and Mechanical Engineering. During World War II, with the shortage of male students, the program was temporarily reduced to two years at Valparaiso University followed by two years at Purdue University.

After the war, four-year engineering programs were reinstated on campus through the initiative of students who raised funds and then designed and built a new engineering laboratory building. The first post- World War II degrees were offered in 1951 in Civil, Electrical, and Mechanical Engineering and have been accredited since 1958. The Indiana Delta Chapter of Tau Beta Pi, the national engineering honor society, was chartered in 1963.

In 1968, the College of Engineering moved to the newly-constructed Gellersen Engineering and Mathematics Center. This facility was provided through the generosity of the late William A. Gellersen of Oakland, California. The building, located on the southeastern edge of campus, contains faculty offices, classrooms, and laboratories for the College of Engineering, the Department of Mathematics and Statistics, and the Department of Computer and Information Sciences.

The optional cooperative education program was initiated in 1983 and the first group of cooperative education students graduated in 1986. In 2003, the Computer Engineering program was accredited. The college added a fifth program, Bioengineering, in the fall of 2017. Accreditation for this program will occur after the first graduating class.

With the beginning of the 2011-2012 academic year, the Donald V. Fites Engineering Innovation Center, a new state-of-the-art facility, was made available to College of Engineering students. It honors one of Valparaiso University's most prolific graduates for
his contributions as CEO and Chairman of the Board for Caterpillar Incorporated. The Fites Center is an approximately 14,000 square foot high-performance building, which houses innovative laboratory, design, and meeting spaces that foster faculty-student interactions. In 2013, it was awarded LEED ${ }^{\circledR}$ Platinum established by the U.S. Green Building Council and verified by the Green Building Certification Institute. LEED (Leadership in Environmental and Energy Design) is the nation's preeminent program for the design, construction, and operation of high-performance green buildings.

The James S. Markiewicz Manufacturing and Projects Center forms a physical link between the Gellersen Engineering and Mathematics Center to the north, and the Fites Center to the south. The Markiewicz Manufacturing and Projects Center includes the Projects Laboratory and the James S. Markiewicz Manufacturing Suite.

The James S. Markiewicz Solar Energy Research Facility became operational during the 2013-14 academic year. This facility provides engineering students with extraordinary laboratory and research experiences involving concentrated solar energy to create commodities and fuels.

Both the Manufacturing Projects Center and the Solar Energy Research Facility are named after James S. Markiewicz, ' 72 ME, whose generosity made these spaces possible.

## College Organization

Administratively, the college is an instructional unit under the direction of the dean. The five programs, Bioengineering, Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering, are directed by the faculty of the three engineering departments under the leadership of department chairs.

## Accreditation

Bachelor of Science degree programs in Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET, Inc. http://www.abet.org. Bioengineering will apply for accreditation after the first graduating class of students.

## Admission Requirements

The requirements for admission of first-year students to the college are listed on page 398 of this catalog. Students who do not meet the mathematics and science requirements for admission to the College of Engineering may be admitted to the PreEngineering Program in the College of Arts and Sciences as described on page 61. Pre-engineers who pass PHYS 141 and MATH 131 and have a grade point average of at least 2.00 in the three categories described on page 324 may request admission to the College of Engineering.

## Transfer Students

Academic work taken at other institutions is evaluated for advanced standing by the Office of the Registrar. The College of Engineering assistant dean for student success, in consultation with the appropriate department chair, determines which credits apply toward the major and a Statement of Equivalence form is completed. Transfer students are urged to communicate with the chair of the department in which they hope to major prior to formally applying for admission to obtain a preliminary assessment of the duration of their plan of study.

## Computers

Computers are very important tools for the professional practice of engineering. For engineering students, having their own computer is as important as having their own textbooks and calculator. All engineering students are required to have a personal computer available for use in their residence.

In addition to their own computer, students have direct access to a wide variety of computing environments, email, and the internet on the campus computing network. Network-connected computers for general student use are located in the Fites and Gellersen Centers and in other buildings across campus. In addition, work stations and personal computers containing software for engineering design, analysis, and simulation are located in various engineering laboratories. Residence halls have network access from individual rooms.

## The Freshman Program

First-year engineering students begin their program of study with a schedule of courses that is consistent for all engineering majors. Work in a selected major begins in the second semester.

The Fundamentals of Engineering course (GE 100) is an integral part of the first-year program. The course focuses on the fundamental concepts of engineering, drawing on topics from each discipline and showing the interdisciplinary nature of the profession. A typical unit consists of a lecture with in-class exercises and a hands-on laboratory experience. Student mentors (i.e., our best students from previous classes) aid in the laboratory projects.

Freshmen will also participate in an Engineering Seminar (GE 199), which features alumni and campus speakers to help them better understand the possible career paths available with an engineering degree.

## Student Advisement

For the first three semesters, students are advised by the Engineering Academic Advisor. Majors are declared before the second semester of the freshman year. Once a major is declared, the student is assigned a faculty mentor from the department they are majoring in. This faculty mentor will become their academic advisor during the fourth semester to help them prepare for their junior and senior years, as well as transition to graduate school or the workforce.

## Herman and Helen Hesse Learning Resource Center

The Hesse Learning Resource Center is an academic support program for students in the College of Engineering. Using peer tutors, it provides free one-on-one tutoring and group study sessions in mathematics, science, and engineering courses for all engineering students. In conjunction with other campus-wide services, it also provides academic coaching, study-skill advising, assistance with technical writing, and group help sessions. Located in Gellersen Center, it is open on all days when classes are in session.

## Senior Project

All students in their senior year are required to complete a major design project. Students are organized into teams to plan, organize, execute, present, and document multidisciplinary design projects under the supervision of the faculty.

## Professional Licensure

Licensure of those who wish to practice professional engineering is required by law in each of the states and the District of Columbia. The purpose of the law is to assure the general public that those professing to practice engineering have been examined and accepted by a State Board of Examiners. Graduate engineers will be able to more fully practice engineering if they are licensed as a Professional Engineer. Licensing requires passing the Fundamentals of Engineering (FE) Examination typically followed by four years of engineering experience, after which the candidate can sit for the Practice of Engineering (PE) Examination. Senior engineering students are provided with information about the licensing process and an invitation, which they are urged to accept, to take the FE Examination during their senior year. The FE exam is administered at an area testing center in an online environment.

## Student Professional and Service Organizations

To heighten student interest in the profession of engineering and in activities of the College of Engineering student body, the college provides general interest programs for all engineering students and sponsors social and recreational activities. Upon selecting a major, students are encouraged to join the student chapter of the related professional society. The American Society of Civil Engineers (ASCE), the Institute of Electrical and Electronics Engineers (IEEE), and the American Society of Mechanical Engineers (ASME) all have active student chapters on campus.

The College of Engineering supports other organizations of interest to its students. These include the Society of Automotive Engineers (SAE) and a vibrant section of the Society of Women Engineers (SWE). In alignment with the University's and College of Engineering's mission statements to develop servant leaders, the Engineers Without Borders ${ }^{\top M}$ (EWB) - Valparaiso Chapter was formed in the spring of 2002. In 2015, that organization has expanded to form Working Across Vocations Everywhere Through Service (WAVES), which includes EWB and other service-related activities. The students have also formed a University organization called Valpo Robotics. The goal of this organization is to design and build robots for various competitions.

Junior and senior students who have distinguished themselves by high scholarship, exemplary character, unselfish activity, and breadth of interest in their profession may be elected to membership in Tau Beta Pi, the national engineering honor society.

## Placement

The Career Center arranges on-campus interviews with a variety of employers who are interested in hiring our graduates. Comprehensive services are also available to assist students seeking employment opportunities with organizations which do not interview on campus. Assistance is also available within and outside the College of Engineering for students wishing to find graduate study opportunities, cooperative education positions, summer employment, or part-time employment during the school year. Resource libraries provide information on employment and graduate school opportunities throughout the United States.

## Special Programs of the College of Engineering

## Cooperative Education

The Cooperative Education Program provides an optional five-year program for personal and career development which integrates classroom theory with career-related work experience. Employment in a salaried position allows students to gain valuable experience, to test career interests and to apply classroom knowledge in an environment related to their professional degree areas. The cooperative education student acquires engineering experience through a planned and supervised program which provides alternating periods of full-time campus study and full-time off campus employment with co-op partners throughout the United States. The initial work assignment normally starts during the summer after the sophomore year. Academic credit is earned for each work period. Students typically complete four or five summer and semester work sessions with the same employer. The Cooperative

Education Program enhances the graduating engineer's placement status, and some employers count the time served as a cooperative education student toward benefits provided to full-time employees. To participate in the program, students' cumulative GPA must be 2.4 or higher.

## Internships

The Engineering Internship Program is an optional program in which all engineering students in good standing, except those participating in the Cooperative Education Program, may participate during their summer breaks. Participation is typically limited to the summer between the freshman and sophomore years through the summer between the junior and senior years. Academic year internships may be accommodated on a case-by-case basis. Students interested in this program can earn up to three credit hours of academic credit for their participation in the program.

## Interdisciplinary Studies

Programs can be arranged to meet special needs or interests of students studying engineering at Valparaiso University. Students interested in career fields such as electromechanical, biomedical or chemical engineering, or medicine can enrich their engineering programs by careful selection of electives. These programs involve replacing technical, professional, and free electives with courses from other disciplines. Each student plans a program of study in consultation with a faculty advisor. Upon graduation, the student receives a Bachelor of Science degree in Civil, Computer, Electrical, or Mechanical Engineering.

## Double Degree Program

Some students wish to obtain a second engineering degree, a Bachelor of Arts or Bachelor of Science degree in the College of Arts and Sciences or the College of Business, in addition to their first degree in engineering. In general, this will require an additional year or more of study. To earn two degrees, students must earn at least 157 credit hours and attain a grade point average of at least 2.00, as well as complete all other graduation requirements for each degree independently. Please refer to the University policy regarding second degrees under the Academic Policies section on page 410.

## Engineering and Masters of Business Administration (MBA) Program.

An engineering student interested in acquiring business, values-based leadership, and entrepreneurial acumen to augment their engineering skillset should consider pursuing the Master of Business Administration (MBA) degree with an Engineering Management concentration. Through careful academic advising and proper selection of either a Business Administration minor or a Fundamentals of Business minor, an engineering student can complete the B.S. in Civil, Computer, Electrical, or Mechanical Engineering and the MBA in five years. Interested students should speak with their academic advisor as early as possible when formulating their plan of study.

## Majors and Minors

An engineering student may earn multiple majors or minors in other colleges of the University by satisfying catalog course and credit requirements for each major or minor. Each major or minor will require at least one course (of at least three credits) above any and all coursework presented for the engineering degree. The extra course cannot include any courses below the curricula requirements for an engineering degree. The use of engineering courses that are cross-listed or that have equivalent course content with courses required for the major or minor is established by official action of the other college. The major or minor will be noted on the student's official academic record.

## Departmental Minors

An engineering student seeking further breadth in their plan of study may earn one or more minors within the College of Engineering. The following minors are available: biomedical engineering, civil engineering, electrical and computer engineering, and mechanical engineering. See the requirements for each in their respective departmental listing.

## Engineering Minor

The Engineering Minor offers non-engineering students an introduction to areas of engineering. This minor is especially appropriate for students with an interest in pursuing a career in an engineering related field. This minor would be of interest to science students who need an approved minor to graduate (see page 55). The College of Engineering assistant dean for student success will serve as the advisor.

A minimum of 18 credit hours of engineering courses is required for this minor. Of these, at least 9 credits must be from 200level or higher courses. GE 100 may not be included, and credit will not be given for both CE 334 and ME 373, for both ECE 261 and ECE 281, and for both CE 212 and ME 252. Students must satisfy course prerequisites. The program of study must be approved by the student's academic advisor.

## Humanitarian Engineering Minor (Minimum 18 Cr.)

The Humanitarian Engineering Minor gives students the understanding and the opportunity to apply engineering concepts to improve the welfare of the less advantaged. Coursework enhances cultural awareness and helps students identify problems that engineers could solve. Professor Peter Johnson is the current advisor.

| GS 180 | Civic Engagement (3 credits) | 1-2 Cr. |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| GEO 102 | Globalization and Development | 3 Cr . |
| INTL 150 | Global Perspectives | 3 Cr . |
| Twelve credits from the following options: |  |  |
| Foundational Humanitarian Courses |  |  |
| GEO 102 | Globalization and Development | 3 Cr . |
| INTL 150 | Global Perspectives | 3 Cr . |
| Civic Society \& Development |  |  |
| ECON 136 | Economics of Health, Education, and Welfare | 3 Cr . |
| ENGL 296 | Traditions of Giving and Serving in American Life | 3 Cr . |
| GEO 320 | Urban Geography | 3 Cr . |
| GS 220 | Contemporary Issues of Philanthropy and Service | 3 Cr . |
| PHIL 125 | The Good Life | 3 Cr . |
| POLS 130 | Comparative Politics | 3 Cr . |
| POLS 261 | State and Local Politics in the United States | 3 Cr . |
| POLS 353 | Principles of Peace and Social Justice | 3 Cr . |
| PSJ 201 | Principles of Peace and Social Justice | 3 Cr . |
| SOC 210 | Contemporary Social Problems | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights and Justice | 3 Cr . |
| Cultural Perspectives |  |  |
| EAST 140 | Introduction to East Asian Culture | 3 Cr . |
| GEO 200 | American Ethnic Geography | 3 Cr . |
| HIST 232 | Latin American History and Society | 3 Cr . |
| HIST 140 | Introduction to East Asian Culture | 3 Cr . |
| HIST 250 | African History and Society | 3 Cr . |
| HIST 329 | Revolution! Insurgence in Latin America | 3 Cr . |
| HIST 333 | Latin American in the Cold War Era | 3 Cr . |
| HIST 341 | Revolution and Its Roots: The Making of Modern China | 3 Cr . |
| HIST 350 | Colonialism and Independence: Understanding Modern Africa | 3 Cr . |
| HIST 355 | Modern Middle Eastern History | 3 Cr . |
| INTL 337 | Ethnology and History of Costa Rica | 3 Cr . |
| THEO 360 | Themes in the History of Religions | 3 Cr . |
| THEO 361 | Indian Religions and Culture | 3 Cr . |
| THEO 362 | Islamic Religion and Culture | 3 Cr . |
| THEO 363 | Religions of China and Japan | 3 Cr . |
| THEO 364 | Native American Religions | 3 Cr . |
| THEO 367 | Topics in South Asian Religions | 3 Cr . |
| THEO 368 | Topics in Abrahamic Religions | 3 Cr . |
| Foreign Language (4 credits maximum) |  |  |
| Global Awareness |  |  |
| EAST 340 | East Asian Humanities Topics | 3 Cr . |
| ECON 326 | International Economics | 3 Cr . |
| GEO 101 | World Human Geography | 3 Cr . |
| GEO 201 | Economic Geography | 3 Cr . |
| GEO 301 | Regional Geographies of the World | 3 Cr . |
| GEO 470 | Political Geography | 3 Cr . |
| INTL 320 | Global Humanitarianism Examined | 3 Cr . |
| POLS 150 | International Relations | 3 Cr . |
| POLS 332 | Politics of China and East Asia | 3 Cr . |
| POLS 333 | Politics of Africa | 3 Cr . |

College of Engineering

| POLS 334 | Politics of the Middle East | 3 Cr . |
| :---: | :---: | :---: |
| POLS 335 | Politics of Developing States | 3 Cr . |
| POLS 336 | Politics of Latin America | 3 Cr . |
| Global Health \& Development |  |  |
| HCL 418 | Global Health Issues | 3 Cr . |
| HS 418 | Global Health Issues | 3 Cr . |
| INTL 335 | Perspectives in Health Care in Costa Rica | 3 Cr . |
| MATH 321 | Mathematical Models of Infectious Diseases | 3 Cr . |
| NURS 360 | Interprofessional Service Learning in Health in Central America | 3 Cr . |
| NUR 418 | Global Health Issues | 3 Cr . |
| PHS 101 | Introduction to Public Health | 3 Cr . |
| PHS 121 | Environment and Health | 3 Cr . |
| PHS 207 | Public Health Education and Promotion | 3 Cr . |
| PHS 418 | Global Health Issues | 3 Cr . |
| PHS 421 | Environmental Health for a Sustainable Future | 3 Cr . |
| SPED 441 | Assistive Technology | 3 Cr . |
| Sustainable Development |  |  |
| ECON 210 | Environmental Economics and Policy | 3 Cr . |
| ECON 336 | Economics of Developing Nations | 3 Cr . |
| ENVS 340 | Water Resources Science and Management | 3 Cr . |
| GEO 260 | Environmental Conservation | 3 Cr . |
| GEO 475 | Culture, Nature, Landscape | 3 Cr . |
| ME 377 | Introduction to Renewable Energy | 3 Cr . |

Note: At least one credit of GS $\mathbf{1 8 0}$ must be for activities in Engineers Without Borders or a similar approved engineering project.
Note: Non-engineering students may earn this minor by completing the Engineering
Minor and the above requirements.
Note: For possible exceptions to this list, please contact Professor Peter Johnson.

## Honors College

Students invited to participate in the program of Christ College take all required engineering courses, as well as courses required in the honors program. Because Christ College courses replace certain non-engineering courses, the College of EngineeringChrist College combination normally requires only four years for completion. Christ College courses provide an enriched program in the humanities and satisfy General Education Requirements for the engineering program. Academic advisors are assigned for both the College of Engineering and Christ College. Engineering students invited to join Christ College are strongly urged to accept the invitation.

## International Experiences

Various optional programs are available through which engineering students may obtain improved understanding of and appreciation for the history, geography, language, culture, and engineering practices of other nations. In addition to the study opportunities described beginning on pages 12 and 19 of this catalog, engineering students are permitted to arrange an international cooperative education assignment. A four-week summer study abroad experience is also available for engineers in Reutlingen, Germany and will be offered on an annual or bi-annual basis.

## Valparaiso University International Engineering Programs (VIEP)

VIEP is a five-year program that combines a major in one of the four engineering fields with a major or minor in German (VIEP German), French (VIEP - French), Spanish (VIEP - Spanish) or a minor in Chinese (VIEP in China). The program allows students to gain multicultural experience and language proficiency along with technical engineering skills and prepares them for careers with one of many international firms located in the United States and around the world.

VIEP-German: Students are required to fulfill all requirements for one of the four engineering majors; take at least one 3- or 4credit German language course per semester beginning, at the latest, in the third semester; participate in the University's Study Abroad Program in Reutlingen, Germany, in the seventh semester; work in a cooperative education placement in Germany during the eighth semester and the ensuing summer; and reside in the Kade-Duesenberg German House and Cultural Center for at least two semesters.

VIEP-French: Students are required to fulfill all requirements for one of the four engineering majors; take at least one 3- or 4credit French language course per semester beginning, at the latest, in the third semester; participate in the University's Study

Abroad Program in Compiègne, France, in the seventh semester and work in a cooperative education placement in France during the eighth semester and the ensuing summer.

VIEP-Spanish: Students are required to fulfill all requirements for one of the four engineering majors; take at least one Spanish language course per semester beginning, at the latest, in the third semester; participate in the University's Study Abroad Program in Zaragoza, Spain, in the seventh semester; and work in a cooperative education placement in Spain during the eighth semester and ensuing summer.

VIEP in China: Students are required to fulfill all requirements for one of the four engineering majors; take at least one Chinese language course per semester beginning, at the latest, in the third semester; participate in the University's Study Abroad Program in Hangzhou, China, in the seventh semester; and work in a cooperative education placement in China during the eighth semester and the ensuing summer.

VIEP-German, VIEP-French, VIEP-Spanish, and VIEP in China are coordinated jointly by the College of Engineering and the Department of Foreign Languages and Literatures. Students who wish to enroll in one of the programs should see their engineering advisor and a German, French, Spanish, or Chinese instructor as early in the freshman year as possible.

## Academic Policies

## Graduation Requirements

Students must complete one of the prescribed engineering curricula as described in the departmental listings. These prescribed courses satisfy the general criteria for baccalaureate-level programs as defined by ABET. The evaluation of advanced standing of transfer students in the Statement of Equivalence is based on meeting these criteria. With the approval of the department chair, the requirement for GE 100 and/or GE 199 may be replaced by another approved course.

In addition to other requirements set forth beginning on page 414 of this catalog, the student's grade point average must meet the following minimums for all work taken at Valparaiso University:

1. A cumulative GPA of 2.00 in all work.
2. A cumulative GPA of 2.00 in mathematics and science courses that satisfy the major and minor requirements.
3. A cumulative GPA of 2.00 in the engineering major. This includes courses identified with the student's departmental prefix (i.e., CE, ECE, and ME, respectively), all general engineering courses (GE), and ECE 281 for ME majors. Computer Science courses are included in this category for Computer Engineering majors.

## Academic Deficiency

Students whose cumulative resident grade point average in any of the three categories listed above under Graduation Requirements falls below 2.00 are considered academically deficient. Such students may be denied the privilege of continuing their studies by being suspended from the College of Engineering unless they succeed in improving the quality of their work to the satisfaction of the faculty during the following semester. These students are considered to be on probation and may be required by their department to take certain prescribed courses and meet specific standards in order to continue their enrollment in the college. It is the policy of the College of Engineering that suspended students may not request reinstatement for one calendar year. If you are reinstated in the College of Engineering and your cumulative resident grade point average in any of the three categories falls below 2.00 after subsequent semesters, you may be suspended from the college immediately.

## Guest Policy

A student not pursuing an engineering major or minor may take one engineering course per semester or summer session. Written recommendation from the department chair and approval of the dean is needed to take two or more courses. Students who have been suspended from the College of Engineering, and are presently enrolled in one of the other colleges, may not enroll in an engineering course unless they have completed the course at an earlier date with an unsatisfactory grade (lower than C-) or have approval of the department chair. Courses that are cross-listed with departments in the other colleges and taken while on academic suspension may not be used to satisfy College of Engineering degree requirements, unless approved by the dean of Engineering.

## General Engineering

## Assistant Dean for Student Success \& Director, Hesse Center Laura L. Sanders; Assistant Professor Wertz.

See page 58 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

## General Engineering Courses

| GE 100 | Fundamentals of Engineering 1.33+1.33, 2 Cr . |
| :---: | :---: |
|  | This is an introductory course that focuses on the fundamental concepts of engineering. Topics are drawn from principles of civil, computer, electrical, and mechanical engineering and show the interdisciplinary nature of the profession. Foundational skills such as problem solving, engineering communication, and teamwork are included. Students will participate in hands-on activities and design projects related to topics covered. Corequisite: MATH 131 or enrollment in the College of Engineering. |
| GE 109 | Mechanics-Statics <br> (Also offered as PHYS 109.) A course in the resolution and composition of forces and moments as applied to the free body diagram. Topics include principles of equilibrium, first and second moments of areas, study of trusses, frames, and machines, and friction. Prerequisites: MATH 131 and PHYS 141. |
| GE 199 | Engineering Seminar <br> This seminar includes topics in engineering opportunities, student success skills, and career planning. S/U grade only. |
| GE 290 | Issues in Technology <br> Introduction to problem solving, decision making, and risk assessment as they relate to the technical decisionmaking process. Engineering measurements will be explored in the laboratory using conventional and computerbased data acquisition systems. Utilizing case studies, the relevant technical and nontechnical decisions associated with issues and projects will be explored. Not open to engineering majors. |
| GE 299 | Humanitarian Engineering Colloquium <br> Students will present their work in humanitarian engineering. Guest speakers will be invited to present topics relating to humanitarian issues. Students pursuing the Humanitarian Engineering Minor are expected to register for the colloquium every spring semester. S/U grade only. |
| GE 301 | Financial and Ethical Decisions in Engineering <br> A discussion of essential non-technical issues that impact engineering decision-making. Topics include calculating measures of financial merit for engineering decisions, selecting the most economically desirable solution from among several alternatives, recognizing situations that require ethical judgment, and applying engineering codes of ethics to make ethical decisions. Concepts of sustainability and sociopolitical influence are discussed. Prerequisite: junior standing. |
| GE 311 | Financial Decisions in Engineering <br> A discussion of essential financial issues that impact engineering decision-making. Topics include calculating measures of financial merit for engineering decisions and selecting the most economically desirable solution from among several alternatives. Prerequisite: MATH 132, sophomore standing, or chair approval. |

An engineering work experience with a pre-selected and approved employer. Requires satisfactory work performance and submission of a final report in approved format. Students may repeat for a maximum of three work sessions. Grading will be on an S/U basis. Prerequisites: student must be in good standing in the College of Engineering and have approval of the student's department chair.

GE 481 Cooperative Education I 2 Cr.
Application of the concepts of engineering in a business, consulting, industrial, or government setting. Emphasis is placed on involvement in real-world engineering projects requiring analysis, design, and investigative skills. Requires satisfactory work performance at a pre-selected employer and the submission of reports in a format approved by each department. This course is graded S/U only for civil and mechanical engineering majors. Prerequisite: approval of the student's department chair.
Cooperative Education II
2 Cr .
A continuation of GE 481. This course requires a satisfactory employer evaluation and reports in a format approved by each department. This course is graded S/U only for civil and mechanical engineering majors. Prerequisite: GE 481 and approval of the student's department chair.

Cooperative Education III
1 Cr .
Application of the concepts of engineering in a business, consulting, industrial, or government setting. Requires the submission of reports in a format approved by each department. This course is graded S/U only for civil and mechanical engineering majors. May be repeated for up to three credit hours. Prerequisite: approval of the student's department chair.

Selected students are permitted to work on a special problem under the supervision of a member of the faculty. Each student is required to keep a progress notebook and to turn in a final report in an approved format. Open only to students with permission of the faculty and approval of the dean.

The application of theoretical and experimental engineering concepts in the analysis and design of an engineering system. Students form teams to plan and organize a multidisciplinary project. Corequisite: GE 311 and GE 312 and [(prerequisite: ECE 340 or ECE 322) or (Corequisite: ME 363 or ME 463)].

## Civil Engineering

## Professors Polito, Weiss; Associate Professors Aljobeh, Raich (chair); Assistant Professors Henschen; Visiting Assistant Professor Grossman.

## Mission

The mission of the Department of Civil Engineering is to provide the highest quality of technical education, which is grounded in the arts and sciences by faculty dedicated to exceptional teaching and extraordinary care for individual students. The department will strive to develop graduates who will be effective members of engineering teams, managers of engineering projects, and serve as leaders in the civil engineering discipline and within the broader community of church and society.

## Program Educational Objectives

The Program Educational Objectives help to direct and measure the success of the Civil Engineering Department in accomplishing its mission. They are broad statements that describe what graduates are expected to attain within a few years of graduation and are based on the needs of the program's constituencies. The Civil Engineering Program Education Objectives state that within five to ten years of graduation, civil engineering alumni will have:

1. Attained a position within the civil engineering community through which they are able to make a positive contribution to the engineering profession and society as a whole.
2. Participated in continuing education activities, such as courses taken for advanced degrees, seminars, workshops, and conferences, demonstrating their commitment to lifelong learning; and
3. Advanced in their profession. Advancement may be demonstrated through achievements such as promotions and licensure.
"Civil engineering is the profession in which a knowledge of the mathematical and physical sciences gained by study, experience, and practice is applied with judgment to develop ways to utilize, economically, the materials and forces of nature for the progressive wellbeing of mankind in creating, improving, and protecting the environment, in providing facilities for community living, industry, transportation, and in providing structures for the use of mankind."

## --American Society of Civil Engineers

The Civil Engineering Program is designed to prepare the graduate to enter the practice of engineering or to pursue graduate study. The program is broad in scope requiring students to complete course work in five major branches of civil engineering (i.e., environmental, geotechnical, structural, transportation, and water resources engineering). Additional depth in one or several branches can be obtained through appropriate electives. The program emphasizes the importance of effective communication (e.g., written and oral); the ability to work in teams; the importance of ethical and professional responsibility; the need to be lifelong learners; and the need to hold paramount the safety, health, and welfare of the public.

Design is an important component of the Civil Engineering Program. This includes distinguishing between analysis and design, exposing students to various design methodologies, and requiring students to develop and evaluate (i.e., using economic, social, safety, and engineering criteria) alternative solutions to realistic engineering problems. The design experience (i.e., individually and in teams) is spread throughout the program and is incorporated into both classroom and laboratory exercises. In the sophomore year, students are introduced to fundamental aspects of the design process in the mechanics of materials and their introductory courses in structural and transportation engineering. In the junior year, additional aspects of the design process and the use of standards, specifications, and building codes are discussed in courses in environmental engineering, water resources engineering, soil and foundation engineering, structural engineering, and transportation engineering. In the senior year, students apply their design skills in their civil engineering electives and capstone design experience. The capstone courses include a major, comprehensive design project in which students work in teams to bring together their accumulated knowledge of civil engineering to solve engineering problems with realistic constraints.

Laboratory work is designed to develop written communication skills, ability to analyze and interpret experimental data, selfconfidence, and to aid in the interpretation and application of classroom theory. The majority of introductory courses in the five branches of civil engineering require a laboratory component. The civil engineering department has modern, well-equipped laboratories in materials engineering, fluid mechanics, soil mechanics, and environmental engineering.


| GE 109 | Mechanics-Statics | 3 Cr . |
| :---: | :---: | :---: |
| GE 199 | Engineering Seminar | 0 Cr . |
| GE 311 | Financial Decisions in Engineering | 1.5 Cr. |
| GE 312 | Ethical Decisions in Engineering | 1.5 Cr. |
| CE 151 | Introduction to Computer-Aided Drafting | 0+3, 1 Cr . |
| CE 202 | Statistical Applications in Civil Engineering | 3 Cr . |
| CE 212 | Materials Engineering | 2+3, 3 Cr . |
| CE 213 | Technical and Professional Writing in Civil Engineering | 1 Cr . |
| CE 215 | Mechanics of Materials | 3 Cr . |
| CE 216 | Introduction to Structural Engineering | 3 Cr . |
| CE 252 | Introduction to Transportation Engineering | 3 Cr . |
| CE 317 | Design of Reinforced Concrete Structures | 3 Cr . |
| CE 318 | Design of Steel Structures | 3 Cr . |
| CE 320 | Soil Mechanics | 3+3, 4 Cr . |
| CE 322 | Soil and Foundation Engineering | 3 Cr . |
| CE 334 | Fluid Mechanics | 3+3, 4 Cr . |
| CE 335 | Hydrology | 3 Cr . |
| CE 354 | Design of Transportation Facilities | 3 Cr . |
| CE 364 | Environmental Engineering I | 3+3, 4 Cr . |
| CE 365 | Environmental Engineering II | 3 Cr . |
| CE 493 | Senior Design I: Project Planning and Management | 2.5+1.5, 3 Cr . |
| CE 494 | Senior Design II: Project Development and Design | 1+6, 3 Cr . |
| Civil Engineering Electives |  | 9 Cr . |
| Total Required for Graduation |  | 130 Cr . |

## Writing Intensive Course (as indicated by a superscript "w")

At least three credits of courses taken to satisfy the Foreign Languages/Diversity Elective, Humanities, Social Science, and Theology Electives, or THEO 200: The Christian Tradition must be a writing intensive course. A list of courses approved as a writing intensive course is provided on page 481.

## Professional Elective

The professional elective requirement may be met by taking a course from an approved list of courses found on page 347 . Other choices may be made available by petition to the Civil Engineering Department.

## Civil Engineering Electives

These nine credits are to be selected from the array of civil engineering electives provided. Courses which fulfill civil engineering elective requirements are indicated with a superscript " $c$ ": (...).

## Cooperative Education

Students may request to substitute up to six credits of GE 481 through GE 483 for the Professional Elective and Technical Elective. Courses GE 481-483 are graded S/U only.

## Technical Elective

The Technical Elective requirement may be met by taking a course from an approved list of courses found on page 347 . Other choices may be made available by petition to the Civil Engineering Department.

## Science Elective

The Science Elective requirement is met by taking a course from an approved list of courses found on page 347.

## Foreign Language/Diversity Elective

Students will take three credits from either foreign languages at the 102 level or above or from the diversity list beginning on page 477.

## Humanities, Social Science, Theology Electives

Students will take six credits from the approved list of Humanities courses, Social Science courses, or Theology courses. Courses may be from the same area or from different areas. See pages 478-480 for Humanities and Social Science courses.

## Civil Engineering Minor (Minimum 18 Cr.)

A minor in civil engineering is available to students majoring in computer, electrical, or mechanical engineering. A minimum of 18 credit hours in civil engineering, excluding CE 202, is required. GE 109 may be counted as part of the 18 credits. A concentration of at least two CE courses in water resources, structural, geotechnical, construction, environmental, or transportation engineering is required. At least nine credits must be at the 300 level or above. Mechanical engineering majors may not use CE 334 as part of the minor. The civil engineering department chair must approve the plan of study.

## Civil Engineering Courses

See page 58 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

## CE 151 Introduction to Computer-Aided Drafting

$0+3,1 \mathrm{Cr}$.
This introductory course will provide students with a basic understanding of the features and consideration associated with the operation of a computer-aided drafting (CAD) system. Students will be introduced to drafting standards and practices in the context of a range of civil engineering disciplines.

CE 202 Statistical Applications in Civil Engineering 3 Cr .
An introduction to the primary statistical and probabilistic models used in the collection and interpretation of civil engineering data. The focus is on summary techniques, regression models, application of the Central Limit Theorem, confidence intervals, and recurrence intervals. Monte Carlo simulation techniques are used to estimate the failure likelihood of a civil engineering system. Prerequisite: MATH 132.

CE 212 Materials Engineering $2+3,3 \mathrm{Cr}$.
Study of the composition, production, properties, and behavior of structural materials such as aggregate, concrete, steel, and timber. Introduction to the use of standardized test methods and data analysis. Laboratory exercises include determination of aggregate properties, concrete mixture design, properties of hardened concrete, properties of ductile metals, and properties of clear wood. Written reports for laboratory exercises are required. Field trips may be required. Prerequisite or Corequisite: CE 215; Corequisite: CE 213.
CE 213 Technical and Professional Writing in Civil Engineering 1 Cr .
Students will be introduced to technical writing in civil engineering, with a focus on laboratory reports, and to professional writing such as memoranda and business letters. Corequisite: CE 212.

Mechanics of Materials
3 Cr.
(Also offered as ME 215 and PHYS 215.) Concepts of stress and strain, stress-strain relationships, states of plane stress and strain at a point; elementary analysis of stress distributions and deformations for axial loading of prismatic members, torsional loading of circular shafts and bending of beams, combined loading; plastic elastic action, and an introduction to statically indeterminate problems. Prerequisite: GE 109.

CE 216 Introduction to Structural Engineering 3 Cr.
An introduction to the behavior, analysis, and design of structures. Topics will include design criteria, loads, analysis of structural members and systems using classical hand methods and computer software, and design with various material types (e.g., steel, concrete, timber, masonry). Prerequisite: CE 215.

CE 252 Introduction to Transportation Engineering
3 Cr.
Topics include transportation system characteristics, transportation demand, transportation planning, transportation engineering studies, human and vehicle design factors, traffic flow and operations, signing and marking, and safety. While highway modes occupy a majority of the time due to their relative importance, other modes such as rail, air, and water will also be discussed. Prerequisite: CE 202.

Geology for Civil Engineers
3 Cr.
A study of the structure of the Earth, including minerals, igneous, sedimentary, and metamorphic rocks. Also discussed are plate tectonics and its relationship to volcanoes, earthquakes, and mountain building. Upon completion of this course, students should be able to apply their knowledge of geology to civil engineering projects. Prerequisite: sophomore standing in the Civil Engineering Department or consent of the chair of the department.

Seven weeks or semester. The investigation of civil engineering topics of special interest. Prerequisites depend on topics offered. Offered upon sufficient demand.
Sophomore Honor Studies in Civil Engineering 1-3 Cr. Independent study of an advanced topic in civil engineering. Available by invitation only. Prerequisite: approval by the Civil Engineering Department.
Design of Reinforced Concrete Structures
Design of reinforced concrete members and structures. Topics will include the design of members for compression, flexure and shear, deflections, bond and anchorage, and footings. Additional topics may include the design of oneway slabs and the design of reinforced concrete frames. ACl strength design methods are used. Prerequisite: CE 216.

Design of Steel Structures

3 Cr .
Design of steel members and structures. Topics will include the design of members for tension, compression, flexure and shear, and the design of simple connections. Additional topics may include the design of composite members and the design of steel frames. LRFD methods are used. Prerequisite: CE 216.
Soil Mechanics 3+3, 4 Cr.
The study of index, mechanical, and hydraulic properties of soils. Soil identification, compaction, shear strength, consolidation, vertical stress distribution, and flow through porous media. Principles of laboratory identification and testing of soils. Site investigation and in situ testing. Prerequisite: CE 215.
A continuation of CE 320. Lateral earth pressures, retaining wall design, elastic stress distribution, settlement, and bearing capacity of foundation systems. Sizing of shallow and deep foundation systems. Prerequisite: CE 320.
Fluid Mechanics
3+3, 4 Cr
An examination of fluid properties, fluids at rest, and fluids in motion. Conservation of mass, and the energy and momentum principles are utilized along with dimensional analysis and similitude. Applications include pumps, flow in conduits, lift and drag, pipe networks, and hydraulic model studies. Integrated with the fluid mechanics per se are principles of mechanics-dynamics. Prerequisites: MATH 132 and CE 215.

## Hydrology <br> 3 Cr .

Introduction to surface water hydrology: hydrologic cycle, precipitation, evaporation, infiltration, runoff, rainfallrunoff relationships, uniform flow in open channels, stream flow measurements, hydrologic routing, hydrologic modeling, hydrologic probability, storm water management, storm sewer design, and applications. Prerequisite: CE 334.
Design of Transportation Facilities
Infrastructure and associated needs for transportation facilities. Highway geometric design and the necessary design aids will be a major focus of the class, but other facilities will also be addressed, particularly rail and airport design. Other topics will include pavement design and the explicit incorporation of safety into the design process Prerequisites: CE 151 and CE 252.
Introductory study of water treatment practices common to urban areas. Laboratory principles and methods related to safety, sampling, data analysis, and measurement of selected physical, chemical, and biological characteristics of water and wastewater are introduced. Field trips are required. Corequisite: CE 334; prerequisite CHEM 116.
Introductory study of physical, chemical, and biological processes for the treatment of domestic wastewater and the design of wastewater treatment unit operations. Prerequisite: CE 364
Junior Honor Studies in Civil Engineering
1-3 Cr.
Independent study of an advanced topic in civil engineering. Available by invitation only. Prerequisite: approval by the Civil Engineering Department.
Advanced Structural Analysis ${ }^{\text {c }}$
Analysis of statically indeterminate structures using energy and/or matrix methods. Direct stiffness and flexibility methods are discussed as are a variety of applications in structural analysis software including response to timedependent loading such as blasts, earthquakes, etc. Prerequisite: CE 216

| CE 418 | Design of Masonry Structures ${ }^{\text {c }}$ <br> Analysis and design of masonry structural system components. The use of appropriate specifications in design. Design projects may be required. Prerequisite: CE 216. |
| :---: | :---: |
| CE 419 | Prestressed Concrete ${ }^{\text {c }}$ <br> Analysis and design of prestressed concrete members and structures. Topics will include flexural stresses, flexural strength, shear strength, loss of prestress, and deflections. Field trips may be required. Prerequisite: CE 317. |
| CE 421 | Geotechnical Aspects of Earthquake Engineering c <br> Causative mechanisms of earthquake, earthquake magnitudes, ground motion, effect of local soil conditions on motions. Response of soils to seismic loading, liquefaction phenomena and analysis of pore pressure development, laboratory and in-situ testing for seismic loading. Prerequisites: CE 202 and CE 320. |
| CE 422 | Advanced Soil Mechanics ${ }^{\text {c }}$ <br> The behavior of soil examined from a fundamental soil perspective. Review of methods of testing to define soil strength and response for clays, sands, and silts; rationale for choosing shear strength and deformation parameters for soils for design application. Prerequisite: CE 320. |
| CE 436 | Water Resources Engineering ${ }^{c}$ <br> Application of the principles of fluid mechanics to analysis and design of water resources projects. Topics include open-channel hydraulics, hydroelectric power, economic analysis, dams, spillways, river navigation, flood control, and water law. Prerequisite: CE 334 or ME 373. |
| CE 442 | Construction Engineering ${ }^{c}$ <br> An introduction to construction management issues such as project delivery systems, construction scheduling, construction estimating, project documents, and legal issues. Prerequisite: junior or senior standing. |
| CE 456 | Railroad Design and Operations ${ }^{\text {c }}$ <br> Essential elements of railroad facility design and operations, with the objective of providing students with a more detailed understanding of railroad functions, design, construction, and operations. The design aspect of the course will include route location, track structure, design and construction of main lines and terminal facilities, maintenance-of-way operations such as track inspection and right-of-way maintenance, railroad bridges and bridge loadings, and drainage requirements. The operations aspect of the course will include basic train handling, train operating characteristics, train makeup and types of trains, train dispatching, yard and terminal operations, and signaling. Prerequisite: CE 354. |
| CE 457 | Traffic Engineering ${ }^{\text {c }}$ <br> Fundamental traits and behavior of road users and their vehicles. Characteristics of a free-flowing traffic stream; capacity and level of service of urban and rural highways, signals and signalized intersection capacity; traffic speeds, volumes, signing and marking; accidents and safety. Taught in alternate years. Prerequisite: CE 252. |
| CE 458 | Urban Transportation Planning ${ }^{\text {c }}$ <br> Fundamentals of urban transportation planning. Topics include the traditional 4 -step planning process, which includes trip generation, trip distribution, mode choice, and trip assignment, data collection and statistical techniques, aggregate and disaggregate modeling, transportation demand forecasting, interaction with land use and urban planning, short-term and long-term plans, traffic impact studies, and environmental studies. Prerequisite: CE 354. |
| CE 459 | Transportation Economics ${ }^{\text {c }}$ <br> Introduces the basics of transportation economics. Topics include fixed costs, incremental costs, elasticities, direct and indirect costs, the application and impact of subsidies, economics of scale, economies of highway-, transit-, rail, air-, and water-based transportation modes. Prerequisites: CE 354 and GE 311. |
| CE 466 | Hazardous Waste Management ${ }^{\mathrm{c}}$ <br> A basic overview of remediation of contaminated soil and ground water at hazardous waste sites including development of site investigation plans, management of field investigations, environmental risk assessments, feasibility studies, innovative remedial design techniques, and case studies. Oral and written reports and field trips are required. |

## CE 467

Senior Honor Studies in Civil Engineering 1-3 Cr . Independent study of an advanced topic in civil engineering. Available by invitation only. Prerequisite: approval by the Civil Engineering Department.

# Electrical and Computer Engineering 

## Professors E. Johnson, Tougaw (chair), Will; Associate Professors Budnik, Khorbotly; Assistant Professors El-Howayek, Marley, Thomas, White; Visiting Assistant Professor Walter.

The Department of Electrical and Computer Engineering offers two degree programs: Electrical Engineering and Computer Engineering. These two degrees share a fundamental theoretical background that is reflected by many common courses and shared laboratory facilities.

In the sophomore year students take foundation courses in analog circuits, digital circuits, and programming. Computer-aided design tools and laboratories supplement the material taught in the classroom. During their junior year, students build on their foundation by studying electronics, linear systems, and embedded microcontrollers. Students also participate in group design projects and are introduced to a variety of realistic design constraints including engineering ethics, safety, and economics. The senior year is anchored by an interdisciplinary capstone project where students begin a systematic study of the design process and apply the knowledge acquired in earlier courses. Projects require the consideration of realistic constraints and standards, formal project management, the building and testing of a prototype, and thorough documentation.

The department supports a diverse set of laboratory facilities. The electronics laboratory supports work in digital and analog systems including power electronics. The digital systems laboratory is used for logic design, embedded microcontrollers and digital filtering systems. The scientific visualization laboratory serves as a research center for all engineering departments to develop applications for virtual reality to augment undergraduate education.

## Electrical Engineering

## Electrical Engineering Mission

We prepare students with the engineering expertise and well-rounded education necessary to lead and serve society.

## Electrical Engineering Program Educational Objectives

The educational objectives of the electrical engineering program are the following:

1. Our graduates will be highly sought and will be recognized as having expertise in electrical engineering.
2. Our graduates will demonstrate a lifelong commitment to expanding their professional expertise.
3. Our graduates will be excellent communicators and highly effective team members and leaders.
4. Our graduates will demonstrate character and values by making ethical decisions throughout their professional careers.
5. In pursuing their vocation, our graduates will strive for the betterment of society.

## Bachelor of Science in Electrical Engineering - <br> Electrical Engineering Major (127 Cr.)

| CORE 110 | The Human Experience | 5 Cr . |
| :---: | :---: | :---: |
| CORE 115 | The Human Experience | 5 Cr . |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| MATH 132 | Calculus II | $3+2,4 \mathrm{Cr}$. |
| MATH 253 | Calculus III | 4 Cr . |
| MATH 260 | Linear Systems and Matrices | 1 Cr . |
| MATH 270 | Ordinary Differential Equations | 3 Cr . |
| One course from the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| One course from the following options: |  |  |
| PHYS 141 | Newtonian Mechanics | $3+0,3 \mathrm{Cr}$. |
| PHYS 151 | Newtonian Mechanics - Honors | $3+0,3 \mathrm{Cr}$. |
| PHYS 141L | Experimental Physics I | $0+3,1 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| PHYS 152 | Physics: Electricity, Magnetism and Waves - Honors | $3+0,3 \mathrm{Cr}$. |
| STAT 240 | Statistical Analysis | 3 Cr . |
| THEO 200 | The Christian Tradition ${ }^{\text {w }}$ | 3 Cr . |
| Foreign Language/Diversity Electivew |  | 3 Cr . |
| Humanities, Social Science, Theology Electives ${ }^{\text {w }}$ |  | 6 Cr . |
| GE 100 | Fundamentals of Engineering | 1.33+1.33, 2 Cr . |
| GE 199 | Engineering Seminar | 0 Cr . |
| GE 311 | Financial Decisions in Engineering | 1.5 Cr. |
| GE 312 | Ethical Decisions in Engineering | 1.5 Cr . |
| GE 497 | Senior Design Project I | 3 Cr . |
| GE 498 | Senior Design Project II | 3 Cr . |
| ECE 100 | Fundamentals of Electrical and Computer Engineering | 2.5+1.5, 3 Cr . |
| ECE 211 | Technical Writing for Electrical and Computer Engineers | 1 Cr . |
| ECE 212 | The Design Process for Electrical and Computer Engineers | 1 Cr . |
| ECE 221 | Digital Logic Design | 2.5+1.5, 3 Cr . |
| ECE 251 | Engineering Programming I | $2.33+2,3 \mathrm{Cr}$. |
| ECE 263 | Linear Circuit Theory I | $3+3,4 \mathrm{Cr}$. |
| ECE 264 | Linear Circuit Theory II | $3+3,4 \mathrm{Cr}$. |
| ECE 322 | Embedded Microcontrollers | 2.5+1.5, 3 Cr . |
| ECE 340 | Electronics I | 2.5+1.5, 3 Cr . |
| ECE 341 | Electronics II | 2.5+1.5, 3 Cr . |
| ECE 360 | Signals and Systems | 3 Cr . |
| ECE 430 | Electromagnetic Field Theory | 3 Cr . |
| Mathematics/Science Electives |  | 9 Cr . |
| Professional Electives |  | 6 Cr . |
| Electrical Engineering Electives |  | 18 Cr . |
| Total Required for Graduation |  | 127 Cr. |

## Writing Intensive Course (as indicated by a superscript " $w$ ")

At least 3 credits of courses taken to satisfy the Foreign Languages/Diversity Elective, Humanities, Social Science, and Theology Electives, or THEO 200: The Christian Tradition must be a writing intensive course. A list of courses approved as a writing intensive course is provided on page 481.

## Cooperative Education

Six credits of GE 481 through GE 483 may be used to satisfy the Professional Electives requirement if a minimum of six credits of cooperative education have been completed. All courses are graded S/U only.

## Electrical Engineering Electives

Eighteen credits must be taken from among the following courses: ECE 222, 252, 422, 424, 429, 450, 452, 453, 455, 460, 471, 472,490 , and 499 . Other courses may be used to satisfy this elective with the approval of the department faculty. A maximum of 3 credits of ECE 499 may be applied to this requirement unless approved by the department faculty. Multiple sections of ECE 490 can be counted toward this requirement provided topics are different.

## Foreign Language/Diversity Elective

Students will take three credits from either foreign language courses at the 102 level or above or from the diversity list beginning on page 477.

## Humanities, Social Science, Theology Electives

Students will take six credits from the approved list of Humanities courses, Social Science courses, or Theology courses. Courses may be from the same area or from different areas. See pages 478-480 for Humanities and Social Science courses.

## Mathematics/Science Electives

The Mathematics/Science Elective requirement may be met by taking one of the approved courses found on page 347 . Other choices may be made available by petition to the ECE Department.

## Professional Electives

These courses are selected, in consultation with the academic advisor, to support the student's specific career goals. A current listing of approved professional electives is available on page 347 . Other choices may be made available by petition to the ECE Department.

## Electrical and Computer Engineering Minor (Minimum 18 Cr. )

A minor in electrical and computer engineering is available for students majoring in civil or mechanical engineering, computer science, mathematics, physics, or chemistry.

| ECE 221 | Digital Logic Design | $2.5+1.5,3 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| ECE 251 | Engineering Programming I | $2.33+2,3 \mathrm{Cr}$. |
| ECE 263 | Linear Circuit Theory I | $3+3,4 \mathrm{Cr}$. |
| At least eight additional credits from ECE courses at the $200-l e v e l ~ o r ~ h i g h e r ~$ | $\mathbf{8 C r}$. |  |
| ECE 211, ECE 212, and ECE $\mathbf{3 5 7}$ may not be used to satisfy this requirement. |  |  |

Note: ME 444 may be taken in place of ECE 460 ; ECE 281 and ME 261 may be combined to satisfy the ECE 263 requirement. In this case, students will need to take 9 credits of additional electives to bring the total to 18 credits.

## Computer Engineering

## Computer Engineering Mission

We prepare students with the engineering expertise and well-rounded education necessary to lead and serve society.

## Computer Engineering Program Educational Objectives

The educational objectives of the computer engineering program are the following:

1. Our graduates will be highly sought and will be recognized as having expertise in computer engineering.
2. Our graduates will demonstrate a lifelong commitment to expanding their professional expertise.
3. Our graduates will be excellent communicators and highly effective team members and leaders.
4. Our graduates will demonstrate character and values by making ethical decisions throughout their professional careers.
5. In pursing their vocation, our graduates will strive for the betterment of society.

| Bachelor of Science in Computer Engineering Computer Engineering Major (127 Cr.) |  |  |
| :---: | :---: | :---: |
| CORE 110 | The Human Experience | 5 Cr . |
| CORE 115 | The Human Experience | 5 Cr . |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| MATH 132 | Calculus II | $3+2,4 \mathrm{Cr}$. |
| MATH 253 | Calculus III | 4 Cr . |
| MATH 260 | Linear Systems and Matrices | 1 Cr . |
| MATH 270 | Ordinary Differential Equations | 3 Cr . |
| One course from the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| One course from the following options: |  |  |
| PHYS 141 | Newtonian Mechanics | $3+0,3 \mathrm{Cr}$. |
| PHYS 151 | Newtonian Mechanics - Honors | $3+0,3 \mathrm{Cr}$. |
| PHYS 141L | Experimental Physics I | $0+3,1 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| PHYS 152 | Physics: Electricity, Magnetism and Waves - Honors | $3+0,3 \mathrm{Cr}$. |
| STAT 240 | Statistical Analysis | 3 Cr . |
| THEO 200 | The Christian Tradition ${ }^{\text {w }}$ | 3 Cr . |
| Foreign Language/Diversity Elective ${ }^{\text {w }}$ |  | 3 Cr . |
| Humanities, Social Science, Theology Electives ${ }^{\text {w }}$ |  | 6 Cr . |
| GE 100 | Fundamentals of Engineering | 1.33+1.33, 2 Cr . |
| GE 199 | Engineering Seminar | 0 Cr . |
| GE 311 | Financial Decisions in Engineering | 1.5 Cr. |
| GE 312 | Ethical Decisions in Engineering | 1.5 Cr . |
| GE 497 | Senior Design Project I | 3 Cr . |
| GE 498 | Senior Design Project II | 3 Cr . |
| ECE 100 | Fundamentals of Electrical and Computer Engineering | 2.5+1.5, 3 Cr . |
| ECE 211 | Technical Writing for Electrical and Computer Engineers | 1 Cr . |
| ECE 212 | The Design Process for Electrical and Computer Engineers | 1 Cr . |
| ECE 221 | Digital Logic Design | 2.5+1.5, 3 Cr . |
| ECE 222 | Advanced Logic Design | 2.5+1.5, 3 Cr . |
| ECE 251 | Engineering Programming I | $2.33+2,3 \mathrm{Cr}$. |
| ECE 252 | Engineering Programming II | 2.5+1.5, 3 Cr . |
| ECE 263 | Linear Circuit Theory I | $3+3,4 \mathrm{Cr}$. |
| ECE 322 | Embedded Microcontrollers | 2.5+1.5, 3 Cr . |
| ECE 340 | Electronics I | $2.5+1.5,3 \mathrm{Cr}$. |
| ECE 357 | Discrete Structures I | 3 Cr . |
| ECE 360 | Signals and Systems | 3 Cr . |
| ECE 422 | Embedded Microcontrollers II | 2.5+1.5, 3 Cr . |
| ECE 424 | Computer Architecture | 3 Cr . |
| ECE 450 | Data Communication Systems | 3 Cr . |
| ECE 452 | Digital Signal Processing | 2.7+1, 3 Cr . |
| Mathematics/Science Electives |  | 6 Cr . |
| Professional Electives |  | 3 Cr . |
| Computer Engineering Electives |  | 13 Cr . |
| Total Required for Graduation |  | 127 Cr . |

## Writing Intensive Course (as indicated by a superscript " $w$ ")

At least 3 credits of courses taken to satisfy the Foreign Languages/Diversity Elective, Humanities, Social Science, and Theology Electives, or THEO 200: The Christian Tradition must be a writing intensive course. A list of courses approved as a writing intensive course is provided on page 481.

## Computer Engineering Electives

Thirteen credits must be taken by choosing from the following courses: CS 225, 230, 250, 260, 325, 330, 335, 345, 358, 365, 372 , ECE $262,341,429,430,455,460,490$, and 499 . Other courses may be used to satisfy this requirement with the approval of the department faculty. A maximum of 3 credits of ECE 499 may be applied to this requirement unless approved by the department faculty. Multiple sections of ECE 490 can be counted toward this requirement provided topics are different.

## Cooperative Education

Six credits of GE 481 through GE 483 may be used to satisfy the Professional Electives requirement if a minimum of six credits of cooperative education have been completed. All courses are graded S/U only.

## Foreign Language/Diversity Elective

Students will take three credits from either foreign language at the 102 level or above or from the diversity list beginning on page 477.

## Humanities, Social Science, Theology Electives

Students will take six credits from the approved list of Humanities courses, Social Science courses, or Theology courses. Courses may be from the same area or from different areas. See pages 478-480 for Humanities and Social Science courses.

## Mathematics/Science Elective

The Mathematics/Science Elective requirement may be met by taking one of the approved courses found on page 347 . Other choices may be made available by petition to the ECE Department.

## Professional Electives

These courses are selected, in consultation with the advisor, to support the student's specific career goals. A current listing of approved professional electives is available on page 347. Other choices may be made available by petition to the ECE Department.

## Electrical and Computer Engineering Courses

See page 58 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.
ECE 100 Fundamentals of Electrical and Computer Engineering 2.5+1.5, 3 Cr.
An introduction to the principles of Electrical and Computer Engineering. Topics include computer tools, DC circuit analysis, and digital circuit analysis and design. Prerequisite: MATH 131.

ECE 200 Computational Techniques for Electrical and Computer Engineers I 2 Cr.
Introduction to the solution of electrical and computer engineering problems using computers. Important software packages such as LabVIEW, MATLAB and PSpice are used. Corequisite: ECE 261.

ECE 201 Computational Techniques for Electrical and Computer Engineers II 2 Cr.
A continuation of ECE 200. Topics involve the solution of electrical and computer engineering problems using computers. Prerequisite: ECE 200. Corequisite: ECE 262.
ECE 211 Technical Writing for Electrical and Computer Engineers 1 Cr.
An introduction to technical writing in electrical and computer engineering. Topics include writing impactful sentences and paragraphs, designing figures, charts, graphs, and tables to effectively convey technical information, and writing for a particular audience. Pre/Corequisite: ECE 263.

ECE 212 The Design Process for Electrical and Computer Engineers
1 Cr .
A study of the design process as it relates to electrical and computer engineering. All steps of the design process will be considered in depth, and students will complete both incremental projects and a comprehensive design project that integrates their knowledge of the course material with technical design constraints. Prerequisites: ECE 221 and ECE 263.

ECE 221 Digital Logic Design
2.5+1.5, 3 Cr .
(Also offered as CS 320.) An introduction to digital logic concepts, including the analysis and design of combinational and sequential digital circuits.

ECE 222
Advanced Logic Design
2.5+1.5, 3 Cr .

A continuation of ECE 221 that includes the design of MSI and LSI digital circuits using a hardware description language (VHDL). Designs are also implemented in programmable logic devices (PALs, CPLDs). Prerequisite: ECE 221 with a minimum grade of $C$.

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A study of the fundamental programming constructs, algorithms, and data structures using industry-standard software. An emphasis is placed on programming strategies and the application of computer algorithms to solve problems in engineering and mathematics. Students cannot receive credit for both ECE 251 and CS 157.

## Engineering Programming II

$2.5+1.5,3 \mathrm{Cr}$.
A continuation of ECE 251 with emphasis on implementing abstract data types and standard algorithms using industry-standard programming languages, with applications to contemporary engineering problems. Topics include the implementation of linked lists, queues, trees, stacks, sets, and sorting algorithms, such as quick sort, merge sort, and bucket sort. Students are also introduced to object orientation. Prerequisite: ECE 251 or instructor's approval. Students cannot receive credit for both ECE 252 and CS 158.

## Linear Circuit Theory I

$2.5+1.5,3 \mathrm{Cr}$.
(Also offered as PHYS 281.) A study of the fundamental methods and theorems of electric circuit analysis. Topics include steady state and transient analysis of DC and AC circuits containing resistors, capacitors, inductors, and operational amplifiers. Prerequisite: MATH 131.

Linear Circuit Theory II
$2.5+1.5,3 \mathrm{Cr}$.
A continuation of ECE 261. Topics include power computations, transformers, frequency response, filters, Laplace transforms, and Fourier series. Prerequisite: ECE 261 with a minimum grade of C.

## Linear Circuit Theory I

$3+3,4 \mathrm{Cr}$.
A study of the fundamental methods and theorems of electric circuit analysis. Topics include steady state and transient analysis of DC and transient circuits containing resistors, capacitors, inductors, operational amplifiers, and the Laplace Transform. Pre/corequisite: MATH 132.

## Linear Circuit Theory II

3+3, 4 Cr.
A continuation of ECE 263. Topics include AC circuits, power computations, transformers, frequency response, filters, Laplace transforms, and Fourier series. Prerequisite: ECE 263 with a minimum grade of C and pre/corequisite MATH 270.

## Fundamentals of Electrical Engineering

2.5 Cr .

A study of the fundamental methods and theorems of electrical circuit analysis. Topics include steady-state and transient analysis of DC and AC circuits containing resistors, capacitors, inductors, and operational amplifiers. Students cannot receive credit for both ECE 261 and ECE 281. Prerequisite: MATH 131.

## Sophomore Project

1-3 Cr.
An independent research, development, or design project done under the supervision of a faculty member. Prerequisite: sophomore standing.

## Sophomore Honor Studies in Electrical and Computer Engineering

1-3 Cr.
Independent study of an advanced topic in electrical engineering. Available by invitation only. Prerequisite: approval by the Electrical and Computer Engineering Department.

## Embedded Microcontrollers

2.5+1.5, 3 Cr .
(Also offered as PHYS 322.) The application of microcontrollers in embedded system design, emphasizing the interaction of hardware and software design. Topics include integrated development environments, CPUs, program and data memories, interrupts, digital inputs and outputs, timer peripherals, serial communication interfaces, and analog-to-digital converter peripherals. Prerequisite: ECE 221 with a minimum grade of C and ECE 251 with a minimum grade of $C$.

Electronics I
$2.5+1.5,3 \mathrm{Cr}$.
An introduction to semiconductor theory and the design and analysis of electronic circuits. Topics include diodes, field-effect and bipolar transistors, CMOS logic circuits, single state discrete transistor amplifiers, and multistage integrated-circuit amplifiers. Prerequisite: ECE 261 with a minimum grade of C.

## Electronics II

2.5+1.5, 3 Cr .

Topics include power amplifiers, DC power supplies, data converters, feedback, oscillators, switched-capacitor circuits, and transistor memory units. Prerequisite: ECE 340.
(Also offered as MATH 220.) An introduction to mathematical reasoning, algorithm analysis, and the concepts that provide a mathematical foundation for computer science. Topics include logic; sets; functions; order notation; proof techniques, including mathematical induction; elementary counting techniques; iterative and recursive algorithms; elementary complexity analysis, and applications. Prerequisite: MATH 131.

Image Processing and Computer Vision 3 Cr.
An introduction to image processing concepts such as image filtering, enhancement, and manipulation. Computer vision processes, including image segmentation, feature extraction, and pattern recognition. Prerequisites: ECE 251 and MATH 260.

ECE 460
Signals and Systems
Continuous and discrete systems and signals are considered in both time and frequency domains. Continuous-time linear systems topics include Fourier series, Fourier transforms, and Laplace transforms. Discrete-time topics include the discrete Fourier transform, the Z-transform, sampling, quantization, and discrete-time processing. Discrete and continuous filtering techniques are introduced. Prerequisite: ECE 263 with a minimum grade of $C$ and MATH 270.

Junior Project 1-3 Cr.
An independent research, development, or design project done under the supervision of a faculty member. Prerequisite: junior standing.
Junior Honor Studies in Electrical and Computer Engineering
1-3 Cr.
Independent study of an advanced topic in electrical engineering. Available by invitation only. Prerequisite: approval by the Electrical and Computer Engineering Department.
$2.5+1.5,3 \mathrm{Cr}$.
Topics include assembly language, low power modes, clock systems, real-time operating systems, and hardware/software co-design. Prerequisite: ECE 322.

Computer Architecture
3 Cr .
The description, organization, and design of computer elements to perform effectively. Instruction set design, caches, pipelining, and microprogramming. Prerequisite: ECE 222 with a minimum grade of C .

VLSI Design Principles and Tools 3 Cr .
An introduction to the fundamental principles of CMOS digital integrated circuit design. Extensive use of CAD tools for layout and simulation. Techniques for speed and size tradeoff are studied. Prerequisite: ECE 221 and ECE 340.

Electromagnetic Field Theory
3 Cr.
The study of fundamental laws of static and dynamic electric and magnetic fields using vector methods. Topics include transmission lines, Maxwell's equations and electromagnetic radiation. Prerequisite: MATH 253 and PHYS 142.

Data Communication Systems
3 Cr.
Theory of interconnected digital systems including information flow control by packet and circuit-switching techniques and standards for communication between network nodes. Prerequisites: ECE 221 and ECE 251.

Digital Signal Processing
$2.7+1,3 \mathrm{Cr}$.
This course is an overview of the theory and techniques of the basic concepts of digital signal processing. Topics covered include design of FIR and IIR filters, construction of algorithms for real-time and off-line signal processing, relationships between analog and digital realizations, and real-time hardware considerations. Prerequisite: ECE 360.

Communication Systems
3 Cr .
Methods of transmission of information by electrical signals through channels limited by bandwidth and additive noise. The characteristics of standard analog and digital modulation schemes such as AM, FM, PAM, and PCM are investigated and related to their channel requirements. Prerequisite: ECE 360 and pre/corequisite: STAT 240.

## Control System Design

A study of the application of feedback analysis and design in the frequency and time domains. Classical design is considered using root-locus and frequency response methods. Models derived from frequency response data are introduced. Introduction to modern control (state-space representation and pole placement) and Luenberger observers. Prerequisite: ECE 360.

A course in the application and design of power semiconductor circuits. Topics include rectifiers, AC controllers, inverters, and switched mode power supplies. Prerequisite: ECE 340.

Power Transmission and Distribution
2.5+1.5, 3 Cr .

The principles of electric power transmission and distribution are studied through the development of models of all major components of a modern electric power grid. The course includes the development and application of power system analysis tools for power flow and fault analysis. Prerequisite: ECE 264

Topics in Electrical and Computer Engineering 1-3 Cr. The investigation of electrical engineering or computer engineering topics of special interest. Prerequisite: consent of the chair of the department.
ECE 499 Senior Honor Studies in Electrical and Computer Engineering 1-3 Cr. Independent study of an advanced topic in electrical engineering. Available by invitation only. Prerequisite: approval by the Electrical and Computer Engineering Department.

# Mechanical Engineering and Bioengineering 

Professor Palumbo; Associate Professors Duncan, Goehler, P. Johnson (chair), Nudehi; Assistant Professors Blood, R. Johnson, Venstrom, D. Zhang; Visiting Assistant Professor Orozco.

## Mission

The Department of Mechanical Engineering and Bioengineering provides a program of professional studies grounded in engineering fundamentals and arts and sciences and augmented by the development of interpersonal skills, experiential learning, and an appreciation of lifelong learning. Graduates are prepared to apply their knowledge to society's needs and help shape the future.

## Mechanical Engineering

## Program Educational Objectives

The educational objectives of the Mechanical Engineering Program are the following:

1. Our graduates will have a vocation.
2. Our graduates will demonstrate growth or advancement in their chosen vocation.
3. Our graduates will contribute to society through their endeavors in their chosen vocation.

## Program Overview

The practice of mechanical engineering includes a wide variety of technical activities in the areas of energy conversion, automatic control of engineering processes, and the design, development, and manufacture of mechanical components and systems. Mechanical engineering contributes to almost every aspect of our society.

The Mechanical Engineering Program prepares the individual for leadership roles on multidisciplinary teams that will address both technical and nontechnical issues. A curriculum solidly comprised of fundamental engineering course work and the humanities and social sciences is an essential element in the preparation process.

Courses are sequenced to build upon a firm foundation in mathematics, basic sciences, and engineering sciences. Courses progressively involve students in engineering design activities and culminate in a major interdisciplinary design experience during the final year of study. Alongside technical issues, design activities address economic, safety, environmental, sustainability, product development, and social factors.

Graduates of the Mechanical Engineering Program at Valparaiso University are qualified to enter industry as practicing engineers or to pursue advanced degrees.

## Mechanical Engineering Laboratories

The Mechanical Engineering Program contains a significant laboratory component which is closely correlated with lecture courses. There are four primary laboratory facilities within the department, and these facilities are home to the eight different laboratory experiences within the program. Personal computers with appropriate hardware and software are available in the laboratories for mechanical design, to acquire and analyze data, to control hardware, and to report results in graphic and tabular form. Additional laboratory facilities support senior design projects and computational assignments.

The Energy Systems Suite includes the Mechanical Measurements Laboratory, the Small Engines Laboratory, and the Engine Test Cell. This facility provides the opportunity to study the laws governing energy transformations due to energy transport as work and heat. The space also enables the students to learn the science of experimental methods by working with state-of-the-art measurement equipment, calibration techniques, and computer data acquisition. This facility includes laboratory equipment such as an internal combustion engine, a gas turbine, a supersonic nozzle, a solar collector, a heat pump, and a wind tunnel.

The Manufacturing Processes and Systems Laboratory supports instruction in methods and theory of metal working, automation, product design and development, and the design, operation, and control of production systems. In addition to metal cutting, forming, welding, grinding and inspection equipment, this laboratory contains Computer Numerical Control (CNC) machine tools.

The Materials Science Laboratory contains equipment for conducting a variety of materials experiments including impact, tension, creep, cold working, hardness, and nondestructive testing. Special emphasis is placed upon modification of material properties by heat treatment. Metallurgical specimens are prepared and examined.

The Analog Circuits, Automatic Control, and Vibrations Laboratory supports instruction in the study of mechanical and electrical systems. For example, the facility is used to control experiments with simulated process systems and the associated instrumentation to control these processes. It also contains mechanical and electrical vibration excitation and measuring devices along with equipment to perform modal analysis and sound measurement.

## Bachelor of Science in Mechanical Engineering Mechanical Engineering Major (128 Cr.)

| CORE 110 | The Human Experience | 5 Cr . |
| :---: | :---: | :---: |
| CORE 115 | The Human Experience | 5 Cr . |
| CHEM 115 | Essentials of Chemistry for Engineers | $3+2,4 \mathrm{Cr}$. |
| One course from the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| MATH 132 | Calculus II | $3+2,4 \mathrm{Cr}$. |
| MATH 253 | Calculus III | 4 Cr . |
| MATH 260 | Linear Systems and Matrices | 1 Cr . |
| MATH 270 | Ordinary Differential Equations | 3 Cr . |
| PHYS 141 | Newtonian Mechanics | $3+0,3 \mathrm{Cr}$. |
| PHYS 141L | Experimental Physics I | $0+3,1 \mathrm{Cr}$. |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| STAT 240 | Statistical Analysis | 3 Cr . |
| THEO 200 | The Christian Tradition ${ }^{\text {w }}$ | 3 Cr . |
| Foreign Language/Diversity Elective ${ }^{\text {w }}$ |  | 3 Cr . |
| Humanities, Social Science, Theology Electives ${ }^{\text {w }}$ |  | 6 Cr . |
| Math/Science Elective |  | 3 Cr . |
| GE 100 | Fundamentals of Engineering | 1.33+1.33, 2 Cr . |
| GE 109 | Mechanics-Statics | 3 Cr . |
| GE 199 | Engineering Seminar | 0 Cr . |
| GE 311 | Financial Decisions in Engineering | 1.5 Cr. |
| GE 312 | Ethical Decisions in Engineering | 1.5 Cr. |
| GE 497 | Senior Design Project I | 3 Cr . |
| GE 498 | Senior Design Project II | 3 Cr . |
| ECE 281 | Fundamentals of Electrical Engineering | 2.5 Cr . |
| ME 104 | Computer-Aided Design | 2 Cr . |
| ME 125 | Computer Programming for Mechanical Engineers | 1 Cr . |
| ME 201 | Technical Writing for Mechanical Engineers | 1 Cr . |
| ME 209 | Mechanics-Dynamics | 3 Cr . |
| ME 215 | Mechanics of Materials | 3 Cr . |
| ME 253 | Introduction to Manufacturing Laboratory | $0+1.5,0.5 \mathrm{Cr}$. |
| ME 261 | Analog Circuits Laboratory | $0+1.5,0.5 \mathrm{Cr}$. |
| ME 270 | Thermodynamics I | 3 Cr . |
| ME 333 | Mechanical Measurements Laboratory | $3+3,4 \mathrm{Cr}$. |


| ME 352 | Materials Science | 2.5+1.5, 3 Cr . |
| :---: | :---: | :---: |
| ME 353 | Manufacturing Processes | 3+1.5, 3.5 Cr. |
| ME 362 | Mechanisms | 3 Cr . |
| ME 363 | Machine Design I | 3 Cr . |
| ME 364 | Vibrations | 2 Cr . |
| ME 373 | Fluid Mechanics | 3 Cr . |
| ME 374 | Heat Power Laboratory | 0+3, 1 Cr . |
| ME 376 | Heat Transfer | 3 Cr . |
| ME 405 | Finite Element Analysis | 2 Cr . |
| ME 444 | Automatic Control | 2 Cr . |
| ME 470 | Thermodynamics II | 3 Cr . |
| Mechanical Engineering Electives |  | 9 Cr . |
| Total Required for Graduation |  | 128 Cr . |

## Writing Intensive Course (as indicated by a superscript "w")

At least 3 credits of courses taken to satisfy the Foreign Languages/Diversity Elective, Humanities, Social Science, and Theology Electives, or THEO 200: The Christian Tradition must be a writing intensive course. A list of courses approved as a writing intensive course is provided on page 481.

## Cooperative Education

Courses GE 481-483 are graded S/U only.

## Foreign Language/Diversity Elective

Students will take three credits from either foreign languages at the 102 level or above or from the diversity list beginning on page 477.

## Humanities, Social Science, Theology Electives

Students will take six credits from the approved list of Humanities courses, Social Science courses, or Theology courses. Courses may be from the same area or from different areas. See pages 478-480 for Humanities and Social Science courses.

## Mathematics/Science Elective

This elective requirement may be met with a course from Biology, Chemistry, Computer Science, Mathematics, Meteorology, or Physics. A list of courses that fulfill the requirement is available on page 347.

## Mechanical Engineering Electives

Nine credits of mechanical engineering courses are to be selected to provide areas of individual study emphasis. Up to three credits may be substituted for students taking an approved technical concentration outside the College of Engineering, regardless of the number of approved technical concentrations taken. Only three hours of ME 499 course credits may be applied as an ME elective.

Courses which fulfill mechanical engineering elective requirements are indicated with a superscript "m": (...) ${ }^{m}$.

## Mechanical Engineering Minor (Minimum 18 Cr.)

A minor in mechanical engineering is available for students majoring in civil, computer, or electrical engineering.

| GE 109 | Mechanics-Statics | 3 Cr. |
| :--- | :--- | :--- |
| ME 209 | Mechanics-Dynamics | 3 Cr. |
| ME 270 | Thermodynamics I | 3 Cr. |
| Nine credits of ME courses at 200-level or above |  |  |
| Note: ECE $\mathbf{4 6 0}$ may be taken in place of ME 444. |  |  |
| Note: Credit may not be received for both ME 215 and CE 215. |  |  |

## Bioengineering

## Program Overview

Bioengineers analyze and design solutions to healthcare problems involving both biology and engineering. Typically these engineers design equipment, materials or software, or develop new procedures that will improve the quality and effectiveness of patient care. The Bioengineering Major offers three possible concentrations: Biomechanics, Bioelectrical, or Biomedical. The biomechanics and bioelectrical concentrations focus more heavily on an engineering foundation while the biomedical concentration includes additional science courses and is the main option for those engineering students interested in attending medical school after graduation.

Courses are sequenced to build upon a firm foundation in mathematics, basic sciences, and engineering sciences. Courses progressively involve students in engineering design activities and culminate in a major interdisciplinary design experience during the final year of study. Alongside technical issues, design activities address economic, safety, environmental, sustainability, product development, and social factors. Graduates of the Bioengineering Program at Valparaiso University are qualified to enter industry as practicing engineers or to pursue advanced degrees.

## Bachelor of Science in Bioengineering - <br> Bioengineering Major (128 Cr.)

| CORE 110 | The Human Experience | 5 Cr . |
| :---: | :---: | :---: |
| CORE 115 | The Human Experience | 5 Cr . |
| One course from the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| MATH 131 | Calculus I | $3+2,4 \mathrm{Cr}$. |
| MATH 132 | Calculus II | $3+2,4 \mathrm{Cr}$. |
| MATH 253 | Calculus III | 4 Cr . |
| MATH 260 | Linear Systems and Matrices | 1 Cr . |
| MATH 270 | Ordinary Differential Equations | 3 Cr . |
| PHYS 141 | Newtonian Mechanics | $3+0,3 \mathrm{Cr}$. |
| PHYS 141L | Experimental Physics I | $0+3,1 \mathrm{Cr}$. |
| PHYS 142 | Physics: Electricity, Magnetism and Waves | $3+0,3 \mathrm{Cr}$. |
| STAT 240 | Statistical Analysis | 3 Cr . |
| THEO 200 | The Christian Tradition ${ }^{\text {w }}$ | 3 Cr . |
| Foreign Language/Diversity Electivew |  | 3 Cr . |
| GE 100 | Fundamentals of Engineering | 1.33+1.33, 2 Cr . |
| GE 109 | Mechanics-Statics | 3 Cr . |
| GE 199 | Engineering Seminar | 0 Cr . |
| GE 311 | Financial Decisions in Engineering | 1.5 Cr. |
| GE 312 | Ethical Decisions in Engineering | 1.5 Cr. |
| GE 497 | Senior Design Project I | 3 Cr . |
| GE 498 | Senior Design Project II | 3 Cr . |
| ME 104 | Computer-Aided Design | 2 Cr . |
| ME 125 | Computer Programming for Mechanical Engineers | 1 Cr . |
| ME 201 | Technical Writing for Mechanical Engineers | 1 Cr . |
| ME 209 | Mechanics-Dynamics | 3 Cr . |
| ME 333 | Mechanical Measurements Laboratory | $3+3,4 \mathrm{Cr}$. |
| ME 352 | Materials Science | 2.5+1.5, 3 Cr . |
| BE 320 | Bioengineering Technologies Lab | $0+3,1 \mathrm{Cr}$. |
| BE 340 | Bioelectricity | 3 Cr . |
| BE 369 | Biomechanics | 3 Cr . |
| BE 415 | Biomaterials | 3 Cr . |
| Total Bioengineering Core Credits |  | 81 Cr . |
| One of the following three tracks: |  | 47 Cr . |


| Biomechanics Track |  |  |
| :---: | :---: | :---: |
| BIO 151 | Anatomy and Physiology I | $3+3,4 \mathrm{Cr}$. |
| BIO 152 | Anatomy and Physiology II | $3+3,4 \mathrm{Cr}$. |
| CHEM 115 | Essentials of Chemistry for Engineers | $3+2,4 \mathrm{Cr}$. |
| ECE 281 | Fundamentals of Electrical Engineering | 2.5 Cr. |
| ME 215 | Mechanics of Materials | 3 Cr . |
| ME 261 | Analog Circuits Laboratory | 0.5 Cr . |
| ME 270 | Thermodynamics I | 3 Cr . |
| ME 373 | Fluid Mechanics | 3 Cr . |
| ME 376 | Heat Transfer | 3 Cr . |
| ME 444 | Automatic Control | 2 Cr . |
| Bioenginee |  | 12 Cr . |
| Humanities | ence, Theology Electives ${ }^{\text {w }}$ | 6 Cr . |
| Bioelectrical Track |  |  |
| BIO 151 | Anatomy and Physiology I | $3+3,4 \mathrm{Cr}$. |
| BIO 152 | Anatomy and Physiology II | $3+3,4 \mathrm{Cr}$. |
| CHEM 115 | Essentials of Chemistry for Engineers | $3+2,4 \mathrm{Cr}$. |
| ECE 100 | Fundamentals of Electrical and Computer Engineering | 3 Cr . |
| ECE 221 | Digital Logic Design | 2.5+1.5, 3 Cr . |
| ECE 251 | Engineering Programming I | $2.33+2,3 \mathrm{Cr}$. |
| ECE 263 | Linear Circuit Theory I | $3+3,4 \mathrm{Cr}$. |
| ECE 322 | Embedded Microcontrollers | 2.5+1.5, 3 Cr . |
| ECE 360 | Signals and Systems | 3 Cr . |
| ECE 452 | Digital Signal Processing | 3 Cr . |
| Bioenginee |  | 7 Cr . |
| Humanities | nce, Theology Electives ${ }^{\text {w }}$ | 6 Cr . |
| Biomedical Track |  |  |
| BIO 171 | Unity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 172 | Diversity of Life | $3+3,4 \mathrm{Cr}$. |
| BIO 270 | Genetics | $3+3,4 \mathrm{Cr}$. |
| BIO 450 | Molecular Biology | $3+3,4 \mathrm{Cr}$. |
| CHEM 121 | General Chemistry I | $3+3,4 \mathrm{Cr}$. |
| CHEM 122 | General Chemistry II | $3+3,4 \mathrm{Cr}$. |
| CHEM 221 | Organic Chemistry I | $3+3,4 \mathrm{Cr}$. |
| CHEM 222 | Organic Chemistry II | 3+3, 4 Cr . |
| CHEM 315 | Biochemistry I | 3 Cr . |
| ECE 281 | Fundamentals of Electrical Engineering | 2.5 Cr . |
| ME 261 | Analog Circuits Laboratory | 0.5 Cr . |
| PSY 110 | General Psychology | 3 Cr . |
| SOC 110 | Introduction to Sociology | 3 Cr . |
| Bioengineering Electives |  | 3 Cr . |

## Bioengineering Minor (Minimum 18 Cr .)

A minor in bioengineering is available for students majoring in civil, computer, electrical, or mechanical engineering, or for students majoring in kinesiology.

| BIO 151 | Human Anatomy and Physiology I | 4 Cr. |
| :--- | :--- | :--- |
| GE 109 | Mechanics-Statics | 3 Cr. |
| ME 125 | Computer Programming for Mechanical Engineers | 1 Cr. |
| ME 209 | Mechanics-Dynamics |  |
| Seven credits of bioengineering electives |  |  |
| Note: Up to three credits of ME 499 may count toward the required seven <br> credits of elective courses with approval from the department chair. |  |  |

## Mechanical Engineering Courses

See page 58 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

| ME 104 | Computer-Aided Design 2 Cr . |
| :---: | :---: |
|  | A course in the theory and technique of engineering graphics related to the design process. Emphasis is placed on orthographic and isometric projections, oblique and section views, and dimensioning and tolerancing. The course focuses on 3-D modeling strategies including line drawings, solid modeling, and parametric modeling using computer-aided design software. Prerequisite: enrollment in the College of Engineering or consent of the department chair. |
| ME 125 | Computer Programming for Mechanical Engineers <br> Introduction to writing computer code to solve mechanical engineering problems. The use of MATLAB as a programming language is developed. Prerequisite: enrollment in the College of Engineering or consent of the department chair. |
| ME 201 | Technical Writing for Mechanical Engineers <br> An introduction to technical writing in mechanical engineering. Common technical formats such as reports, email, and memorandums will be covered. Topics include outlining, figure and table development, paragraph and sentence development, and overall communication of technical matter. Pre- or Corequisite: ME 209. |
| ME 209 | Mechanics-Dynamics <br> A study of individual particles and systems of particles in rectilinear and curvilinear motion in two and three dimensions. The course includes motion of a rigid body in translation, rotation, and general plane motion; forces involved in moving systems; use of work and energy relations; and impulse and momentum. Prerequisites: MATH 132 and GE 109. |

ME 215 Mechanics of Materials 3 Cr .
(Also offered as CE 215 and PHYS 215.) Concepts of stress and strain, stress-strain relationships, states of plane stress and strain at a point; elementary analysis of stress distributions and deformations for axial loading of prismatic members, torsional loading of circular shafts and bending of beams, combined loading; plastic elastic action, and an introduction to statically indeterminate problems. Prerequisite: GE 109.

ME 253 Introduction to Manufacturing Laboratory 0+1.5, 0.5 Cr.
A laboratory experience in manual machine shop operations including shop safety, inspection, operation planning, and metal cutting. Prerequisite: ME 104.

ME 261 Analog Circuits Laboratory 0+1.5, 0.5 Cr .
Seven laboratory experiences will introduce AC and DC analog circuit analysis. Students will design, build, and analyze electrical circuits. Pre- or Corequisite: ECE 281.

ME 270 Thermodynamics I 3 Cr .
A study of the first and second laws of thermodynamics. Extensive use of these laws is made in analyzing processes and cycles. Additional topics covered are ideal gases, non-reactive gas, and gas-vapor mixtures, as well as other simple compressible substances. Prerequisites: MATH 132 and PHYS 141.

Mechanical Measurements Laboratory
$3+3,4 \mathrm{Cr}$.
(Also offered as PHYS 333.) A study of fundamental concepts and physical principles involved in the science of measurement and design of experiments. Experiments involve calibration and testing (both static and dynamic) of primary elements, signal amplifiers, transducers and readout devices. Experimentation utilizes laboratory and industrial instruments. Extensive use is made of computer data acquisition and analysis. Prerequisites: CORE 110 and PHYS 142; Pre- or Corequisite: ME 125, ME 201, and ME 370 (or ME 270). ME 201 and/or ME 370 (or ME 270). Pre- or Corequisite may be waived with approval of the chair of the ME department.
(Also offered as PHYS 352.) A study of structure-property-processing relationships of engineering materials related to their selection in design and manufacturing processes. Methods of controlling structure and mechanical properties of materials are studied with an emphasis on the strengthening mechanisms. Processes studied include solidification, phase transformation, and mechanical working of metals. Prerequisites: MATH 132 and CHEM 115 or CHEM 121.

Descriptive and analytical treatment of manufacturing processes and production equipment. Topics include metal forming, metal cutting, plastic fabrication, Statistical Process Control (SPC), and Computer Numerical Control (CNC). Prerequisites: ME 125, ME 215, and ME 252 (or ME 352); Pre- or Corequisite: ME 253.

Mechanisms 3 Cr.
Graphical and analytical approaches to kinematic analysis and synthesis of linkages, gears, and cams. Linkage topics include displacement, velocity, and acceleration analysis along with type, number, and dimensional synthesis. Fundamentals of gears and gear trains are investigated. Cam sizing and application of motion programs to cam design are considered. Prerequisites: ME 209 and ME 125; Pre- or Corequisite: MATH 253.

## Machine Design I

3 Cr.
The application of specialized topics in mechanics of materials to the design and analysis of machine elements. Topics include combined stress, contact stress, stress concentration, fatigue, deflection, and theories of failure. Stress principles are applied to springs, bolts, joints, and general machine elements. Prerequisite: ME 104, (ME 125 or ME 225), and ME 215.

$$
\text { or ME 225), and ME } 215 .
$$

Vibrations
2 Cr .
Fundamentals and principles of mechanical vibration. Mathematical formulation of the equations of motion for single and multi-degree of freedom systems. Analysis of natural frequency, damped natural frequency, free and forced vibration of mechanical systems. Prerequisites: ME 209, ME 125, ME 215, MATH 260, and MATH 270.

Fluid Mechanics
3 Cr .
The basic conservation equations in control volume form are developed and used in engineering applications of fluid motion. Topics include fluid statics and the dynamics of both compressible and incompressible flows. Prerequisite: ME 209.

Heat Power Laboratory
$0+3,1 \mathrm{Cr}$.
Experimental studies designed to reinforce theory presented in the areas of heat transfer, thermodynamics, and fluid mechanics. Experiments deal with topics such as flow and heat transfer mechanisms, refrigeration, and internal combustion engines. Prerequisites: ME 333, ME 370 (or ME 270), and ME 373; Pre- or Corequisite: ME 376.

## Heat Transfer

 3 Cr.The fundamentals of heat transfer by conduction, radiation, and forced and free convection are developed and applied to engineering problems. Prerequisite: ME 370 (or ME 270).
Introduction to Renewable Energy ${ }^{m}$
1 Cr .
A study of the global energy crisis. Students will identify the challenges of the current energy system and investigate alternative energy systems including renewables and their associated technologies. As a focus of their studies, students will evaluate the role that alternative energy systems can play in solving the energy crisis based on their availability and sustainability. Prerequisite: Instructor approval.

## Finite Element Analysis

2 Cr .
Finite element methods for analysis of steady-state and transient problems in solid, structural, fluid mechanics, and heat transfer. Presents finite element methods and solution procedures for linear problems. Modeling of problems and interpretation of numerical results. Prerequisites: ME 104, ME 125, ME 215, MATH 253, MATH 260, and MATH 270. Pre- or Corequisite: ME 373.

Automatic Control
2 Cr.
Fundamentals of instrumentation and control with particular application to the process industries. System dynamics are analyzed using step, ramp, and frequency response techniques. Laboratory experiments involve system stability, controller selection and adjustment, numerical analysis techniques, and system sequencing to achieve specific control objectives. Prerequisites: MATH 260, and MATH 270; Pre-or Corequisite: ME 333.

## Mechanical Behavior of Materials ${ }^{m}$

An introduction to the deformation and fracture behavior of metals, ceramics, polymers, and composites. Topics include yielding criterion, plastic deformation, strain hardening, strengthening mechanisms, viscoelasticity, fatigue, fracture, creep, and microstructure/ mechanical property relationships. Prerequisites: ME 215, ME 252 (or ME 352).

| ME 455 | Production Systems and Automation ${ }^{m}$ ( 3 Cr. |
| :---: | :---: |
|  | A study of productions system theory including Lean Manufacturing, Theory of Constraints, Six Sigma and Group Technology, and a study of automation implementation in manufacturing and distribution facilities including material handling systems, automatic data capture systems, and machine tools. Prerequisite or Corequisite: ME 353. |
| ME 456 | Non-Traditional Manufacturing ${ }^{\text {m }}$ ( 3 Cr . |
|  | A study of non-traditional manufacturing technologies that utilize photonic, electrical, chemical, ultrasonic, and magnetic energy sources to process materials. This course provides an introduction to the machine tools that utilize these energy sources, examines the physics driving the processes, and discusses possible applications for each technology. Prerequisite or Corequisite: ME 353. |
| ME 457 |  |
|  | A laboratory experience in CAM programming, CNC machining, welding, and non-traditional manufacturing including 3D printing, plasma cutting, and laser etching and cutting. Prerequisite or Corequisite: ME 353. |
| ME 460 | Spatial Manipulators ${ }^{m}$ m 3 Cr. |
|  | An application of linear algebra, trigonometric techniques, and kinematic principles to study the motion of spatial mechanisms. The course will examine various types of manipulators that range in complexity from simple two-degree-of-freedom planar robots to the human arm. Prerequisites: (ME 125 or ME 225), ME 209, MATH 260, and MATH 270. |
| ME 467 | Robotics, Vibrations, Controls, and Electromachinery Laboratory ${ }^{m}$ ( ${ }^{\text {cr. }}$ |
|  | A laboratory experience in robotic programming, modal testing techniques, system modeling and control design algorithms, and DC/AC motor systems. Prerequisite or Corequisite: ME 261 or ECE 261. |
| ME 470 | Thermodynamics II 3 Cr. |
|  | Continuation of ME 270. Topics include combustion principles and cycle optimization using the second law of thermodynamics. Prerequisites: ME 370 (or ME 270) and CHEM 115. |
| ME 475 | Advanced Topics in Thermodynamics and Heat Transfer ${ }^{\text {m }} 3$ Cr. |
|  | Topics may include a continuation of material in ME 376 such as advanced conduction, convention, or radiation heat transfer. It may include a continuation of topical material in ME 470 such as combined cycle analysis, turbomachinery design principles, and combustion with emphasis on chemical kinetics and mass transfer effects. The topic is determined by the instructor prior to the course offering based, in part, on student interest. Prerequisites: ME 370 (or ME 270), ME 373, and ME 470; Pre- or Corequisite: ME 376 . ME 470 prerequisite can be waived with instructor approval. |
| ME 476 | Advanced Topics in Fluid Mechanics ${ }^{m}$ ( ${ }^{\text {m Cr. }}$ |
|  | Topics may include computational fluid dynamics or a continuation of topical material in ME 373 such as compressible fluid flow. The topic is determined by the instructor prior to the course offering based, in part, on student interest. Prerequisites: ME 370 (or ME 270) and ME 373; Pre- or Corequisite: ME 376. |
| ME 477 | Solar Thermal Technology ${ }^{m}$ ( 3 Cr. |
|  | The fundamentals and applications of solar thermal energy systems are developed and discussed. Topics include residential water heating, residential and commercial space heating, and solar concentrating systems. The subject is an application of thermodynamics, fluid mechanics, and heat transfer. Prerequisite: ME 370 (or ME 270). Prerequisite or Corequisite: ME 376. |
| ME 490 | Topics in Mechanical Engineering ${ }^{m}$ 0.5-3 Cr. |
|  | Seven weeks or full semester. The investigation of mechanical engineering topics of special interest. Prerequisite: consent of the department chair. Offered upon sufficient demand. |
| ME 499 | Undergraduate Research in Mechanical Engineering m, b Independent study of an advanced topic in mechanical engineering. This course may be repeated for additional credit. Available by invitation only. Prerequisite: approval by the Mechanical Engineering Department. |

## Bioengineering Courses

See page 58 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.
BE 320 Bioengineering Technologies Lab
$0+3,1 \mathrm{Cr}$. Experimental studies designed to reinforce theory presented in the areas of biomechanics, biomaterials, and bioelectricity. Experiments deal with topics such as simulation of human movement using musculoskeletal models, motion capture of human movement, acquiring and filtering bioelectrical signals from human subjects, and testing of materials used in joint replacements. Prerequisites: ME 201, ME 333.

| BE 340 | Bioelectricity <br> Introduction to biomedical signals and systems. Time and frequency domain analysis: convolution representation, <br> Fourier series, Fourier transforms, frequency response, filtering, and sampling. Prerequisites: ME 125, ECE 261, and <br> MATH 270. |
| :--- | :--- |
| BE 369 | Biomechanics <br> An application of linear algebra, engineering principles, and anatomical knowledge to study the motion of human <br> bodies. The course will examine how the nervous system stimulates various muscles which in turn actuates the <br> skeletal system in a desired movement based on the complex, three-dimensional kinematic and kinetic descriptions <br> of human anatomy. Prerequisites: ME 125, ME 209, and MATH 260. |

Biomaterials
An expansion of the principles of materials science and mechanics of materials; biocompatibility and biological reactions to implanted materials; natural biomaterials and synthetic materials used in biological applications. Prerequisites: ME 252.
Topics in Biomechanics ${ }^{\text {b }}$
3 Cr.
Seven weeks or semester. The investigation of bioengineering topics of special interest. Prerequisites: approval of the instructor.

## College of Engineering Electives

## Approved Civil Engineering Professional Electives

Any CE approved Technical Elective
CE 290 - Professional Engineering Management
GE 495: Professional Communication \& Interpersonal Relations
Minor courses: Any class above that required for a CE degree that is used to fulfill a minor requirement
Foreign Language: Any foreign language class (language only not other courses offered in a foreign language department)
ACC: Any ACC course
BLAW: Any BLAW course
FIN: Any FIN course
IDS: Any IDS course
MGT: Any MGT course
MKT: Any MKT course
Any ROTC course

## Approved Civil Engineering Science Electives

BIO 215 or CE 281

## Approved Civil Engineering Technical Electives

Biology: Any biology course above that required for graduation, or their equivalent.
Chemistry: Any chemistry course above that required for graduation, or their equivalent.
Physics: Any physics course above that required for graduation, or their equivalent.
CE: Any CE course above that required for graduation.
ME: Any ME course.

## ECE: Any ECE course.

Math: Any math course above that required for graduation and numbered 250 or higher.
CS: Any CS course numbered 156 or higher.
ENVS: Any ENVS course.
GEO: 215, 415/515, 225, 230, 321
MET: 372, 373, 369
GE 481, 482, 483

## Approved Electrical and Computer Engineering Math/Science Electives

Astronomy 252 and 253
Biology: 151, 152, 171, 172, 210, 260, and 270.
Chemistry: Any courses numbered 115 and above
Mathematics: 220, 264, 266, 314, 320, 321, 322, 323, 330, 334, 370, 371, 421, 422, 451, 452, 461, and 462.
Statistics: IDS 340, STAT 340, 343, and 344.
Meteorology: 215, 216, and 240.
ECE 357 (Electrical engineers only)
Physics: 142L, 243, 245, 250, 345, 360, 371, 372, 381, 421, 422, 430, 430L, and 440.

## Approved Electrical and Computer Engineering Professional Electives

## Engineering Courses

Civil Engineering: Any CE course other than CE 202.
Electrical and Computer Engineering: Any ECE course (other than 281) not used for another graduation requirement.
Mechanical Engineering: Any ME course other than ME 125 or ME 261.
General Engineering: GE 109 and GE 495 (Dale Carnegie). GE 481, 482, and 483 may be used only if the student has completed at least six credits of a cooperative education program in engineering.

## Mathematics, Science, and Computer Science Courses

Astronomy: 101, 101L, 221, 252, and 253.
Biology: 125, 151, 152, 171, 172, 210, 260, and 270.
Chemistry: Any courses numbered 115 and above
Computer Science: 225, 230, 240, 245, 250, 260, 325, 330, 335, 340, 345, 358, 365, and 372.
Mathematics: 220, 264, 266, 314, 320, 321, 322, 323, 330, 334, 370, 371, 421, 422, 451, 452, 461, and 462.
Physics: 142L, 243, 245, 250, 345, 360, 371, 372, 381, 421, 422, 430, 430L, and 440.
Statistics: STAT 340, 343, and 344.

## Business Courses

Accounting: ACC 205, 206, and any courses numbered 300 and above.
Business Law: BLAW 104 and 404.
Decision Science: Any courses numbered 300 and above.
Finance: Any courses numbered 300 and above.
Management: Any courses numbered 300 and above.
Marketing: Any courses numbered 300 and above.

## ROTC Courses

Any ROTC course used to satisfy the Army ROTC or Air Force ROTC program requirements.

Foreign Language Courses
Chinese: FLC 101, 102, 203, 204, 305, 306, 407, and 408.
East Asian Studies: EAST 109, 110, 209, 210, 309, and 310.
French: FLF 101, 102, 203, 204, and 305.
German: FLGR 101, 102, 203, 204, and 307.
Japanese: FLJ 101, 102, 203, 204, 305, and 306.
Spanish: FLS 101, 102, 203, 204, and 307.
Other Arts and Sciences Courses
Communication: 145, 243, 345, 360, 366, and 372.
Economics: ECON 221, 222, 233, 321, 322, 325, 326, 336, 337, and 339.
English: ENGL 300 and 310.
Geography: GEO 101, 102, 104, and 301.
Meteorology: MET 103, 215, 216, and 240.
Approved Mechanical Engineering Mathematics/Science Electives
ASTR 101
BIO 151, BIO 171
CE 281
CHEM 116, CHEM 122, CHEM 132
CS 156, CS 157
MATH 220, MATH 320, MATH 321, MATH 322, MATH 323, MATH 330, MATH 334, MATH 370, MATH 451
MET 240 (must get approval from MET)
PHYS 142L, PHYS 243, PHYS 245, PHYS 246, PHYS 250
STAT 340, STAT 344, STAT 441

## College of Nursing and Health Professions

Visit the College of Nursing and Health Professions online.


Dean Karen Allen, Ph.D., RN, FAAN
The college offers curricula leading to the Bachelor of Science in Nursing, Health Care Leadership, Health Sciences, and Public Health.

The college also admits transfer students and registered nurses who want to earn a baccalaureate degree in nursing. Registered nurses, accelerated, and transfer students may complete the requirements for the Bachelor of Science in Nursing degree in less than four years.
R.N. students enrolled in the R.N.-M.S.N. program may complete the B.S.N. and M.S.N. degree in less than three years. Acceptable transfer credit hours from another college or university and credit by examination may be applied toward required and elective credit hours. The transitional course, NUR 275, is required for registered nurses.

## Mission

The mission of Valparaiso University College of Nursing and Health Professions at the undergraduate and graduate levels is to prepare critically inquiring and competent professional nurses and other healthcare providers who embrace truth and learning and who respect Christian values while promoting health for persons in dynamic health care environments.

Please note that students who matriculate in the CONHP will be guided about how to obtain a certified criminal background check, which may be required for placement in health care facilities. Infractions will be reviewed by the dean and students will be counseled as to repercussions of a positive background check. Infractions might make it impossible to place students in health care facilities for practical experience, prevent graduates from sitting for certification or licensing exams, and interfere with employment options.

## Nursing

Professors T. Kessler, N. Schmidt; Associate Professors Brandy, Cory, Genovese, Kost, Zentz (Assistant Dean of Undergraduate Nursing); Assistant Professors Blodgett, Cavinder, Coto, J. Koch (Assistant Dean of Graduate Nursing), Kurtz, Munden, Rayman, Winkler; Clinical Assistant Professors Bleza, Migler, Sheets, Slack, Zart; Visiting Assistant Professors El Harit.

## Purpose

The purpose of the nursing programs is to prepare beginning and advanced professionals of nursing and to provide an educational base for graduate study based on professional standards.

## Objectives

The B.S.N. graduate will:

1. Enter the profession as a critically inquiring competent professional nurse who uses the processes of critical thinking, communication, change, and lifelong learning.
2. Engage in the role components of provider of care, teacher, manager, and research consumer wherever persons live, work, play, and/or worship.
3. Appreciate how the environmental influences of culture, economics, ethics, law, policy, politics, society, and technology impact a person's health.
4. Promote the health of persons in dynamic health care environments using primary, secondary, and tertiary prevention strategies.
In accordance with the philosophy of Valparaiso University, the faculty of the nursing program believes its responsibility is to foster intellectual, emotional, and spiritual growth of the student as an educated person and as a competent professional nurse. The curriculum, therefore, includes a wide variety of foundational courses in the natural and social sciences and the liberal arts as well as courses related to the principles and practice of nursing. Permeating the curriculum is cultivation of the spirit of the University's Christian tradition in the student's quest for excellence in all areas of personal and professional life.

Bachelor of Science in Nursing (Minimum 124 Cr.)

| Nursing |  | 64 Cr. |
| :---: | :---: | :---: |
| Grade of C (2.0) or Better Required: |  |  |
| NUR 201 | Professional Role in Nursing | 3 Cr . |
| NUR 203 | Health Assessment | 2+1, 3 Cr . |
| NUR 210 | Therapeutic Interventions for the Professional Nurse | 2+2, 4 Cr. |
| NUR 212 | Introduction to Community-Based Nursing and Health Promotion | 2.5+0.5, 3 Cr . |
| NUR 325 | Nursing Care of the Childbearing Family | $3+2,5 \mathrm{Cr}$. |
| NUR 341 | Psychiatric Mental Health Nursing | 3+2, 5 Cr. |
| NUR 351 | Gerontological Nursing | 3 Cr . |
| NUR 354 | Nursing Care of Adults I | $3+2,5 \mathrm{Cr}$. |
| NUR 356 | Nursing Care of Adults II | $3+2,5 \mathrm{Cr}$. |
| NUR 415 | Introduction to Nursing Research for Evidence-Based Practice | 3 Cr . |
| NUR 418 | Global Health Issues | 3 Cr . |
| NUR 425 | Nursing Care of the Childrearing Family | 3+2, 5 Cr. |
| NUR 458 | Complex Health Care Needs of Adults | 2.5+1.5, 4 Cr . |
| NUR 460 | Public Health Nursing | 3+2, 5 Cr. |
| NUR 470 | Management and Leadership Strategies for the Professional Nurse | 3 Cr . |
| NUR 480 | Professional Role Practicum | 1+4, 5 Cr . |

College of Nursing and Health Professions

| Arts and Sciences |  | 51 Cr . |
| :---: | :---: | :---: |
| CORE 110 | The Human Experience | 5 Cr . |
| CORE 115 | The Human Experience | 5 Cr . |
| THEO 200 | The Christian Tradition | 3 Cr . |
| Upper Level Theology |  | 3 Cr . |
| ENGL 205 | Writing in the Health Sciences** | 3 Cr . |
| One of the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| Humanities |  | 3 Cr . |
| One course from the following options: |  |  |
| CHEM 111* | Introduction to Chemistry | 3+2, 4 Cr . |
| CHEM 121* | General Chemistry I | $3+3,4 \mathrm{Cr}$. |
| CHEM 131* | General Chemistry I-Honors | 3+3, 4 Cr . |
| BIO 151* | Human Anatomy and Physiology I | $3+3,4 \mathrm{Cr}$. |
| BIO 152* | Human Anatomy and Physiology II | 3+3, 4 Cr . |
| BIO 210* | Microbiology | $3+3,4 \mathrm{Cr}$. |
| BIO 260* | Human Nutrition | 3 Cr . |
| PSY 110* | General Psychology | 3 Cr . |
| PSY 201* | Statistical Methods | 3 Cr . |
| PSY 215* | Lifespan Development | 3 Cr . |
| Electives |  | 9 Cr . |

Note: No more than four credit hours in applied music, including ensemble, and no more than four credit hours of KIN 101-149 may be applied toward a Bachelor of Science in Nursing degree. No more than 6 credits may be baccalaureate nursing credits.

* Grade of C (2.0) or better required
**RN-BSN students will fulfill this requirement by taking NUR 275


## Requirements for Admission to the Nursing Program

Freshman students who have declared nursing as a major will be admitted directly into the nursing program.
The minimum criteria for admission into the Accelerated Bachelor of Science in Nursing option is a cumulative 3.0 grade point average in previous college course work, completion of all science prerequisite courses, and a minimum of 76 transfer credits.

Associate degree and diploma graduates are eligible for admission to the R.N.-B.S.N. degree program if they are licensed as a registered nurse in Indiana. Registered nurses are eligible for admission to the R.N.-M.S.N. option if they have a 3.0 grade point average in at least 51 credits of prerequisite course work.

## Progression

Beginning in NUR 203, students are required to present evidence of a criminal background check, current immunizations, and rubella titer. Additionally the following requirements must be updated annually: physical examination, Mantoux test, CPR certification or recertification, and a negative drug screen. Drug screening can be requested randomly. The College of Nursing and Health Professions does not make arrangements for meeting these requirements.

Students must maintain a minimum cumulative grade point average of 2.50 in all course work and 2.50 in the required nursing courses in the nursing major to remain in the nursing program. Students must earn a grade of $\mathrm{C}(2.0)$ or better in courses designated in sections A and B $\left(^{*}\right.$ ) of Graduation Requirements.

Dismissal from the nursing program occurs when a student earns a grade of less than 2.0 in any two of the following courses: required courses with a nursing number, BIO 151, BIO 152, BIO 210, and CHEM 111. No nursing course may be repeated more than once.

All nursing students are required to take a series of evaluative achievement tests throughout their nursing coursework. The fee is currently $\$ 850$, payable when registered for NUR 201, but is subject to change.

## Minor

A nursing student may declare a minor in another college provided that no more than six credit hours of courses required for the nursing major are used in fulfilling requirements of the minor. The minor is noted on the student's academic record.

## Course Intensification

A student in the nursing program may propose a special project for earning one extra credit in one nursing course in which they are enrolled in a given semester. Only 6 credits of nursing courses count toward the required 9 elective credits for the Bachelor of Science in Nursing degree.

The following regulations pertain to this option for a student:

1. Student must have a nursing GPA of 2.7 or above.
2. The course must be offered in the College of Nursing and Health Professions for 3 or more credits.
3. Student must meet with the academic advisor to determine if course intensification is appropriate. The initiative and responsibility for developing a satisfactory proposal lie with the student.
4. Student must obtain the advisor's signature on the petition to intensify a course.
5. Student must submit a one-page proposal for the intensification project and the petition to the instructor of the course for approval.
6. Student must submit the approved proposal for the intensification project and the petition to the dean for approval.

## Student Nurses Association

All student nurses are invited to join the Student Nurses Association.

## Sigma Theta Tau International

Students who have completed at least one-half of the required nursing courses and who have demonstrated superior scholastic achievement and evidence of professional leadership potential may be elected to membership in this international honor society of nursing. The Zeta Epsilon Chapter was installed at Valparaiso University in 1982.

## Commission on Collegiate Nursing Education (CCNE)

The nursing program is accredited by the Commission on Collegiate Nursing Education, One Dupont Circle, NW, Suite 530, Washington, DC, 20036-1120; phone 202-887-6791; www.aacn.nche.edu.

Note: Students are responsible for transportation to and from all clinical and community agencies and for transportation associated with home visits. The College of Nursing and Health Professions uses a variety of accredited health facilities to provide broad clinical experience for students; consequently, access to a car is necessary in most clinical courses.

Note: Prerequisites for the following courses are at least sophomore standing, completion of BIO 151, BIO 152, and CHEM 111, and a cumulative grade point average of 2.50 or above.

## Nursing Courses

NUR 201 Professional Role in Nursing 3 Cr .
An overview of professional nursing practice, analyzing the concepts of person, health, nursing, and environment. Explores the expanding role of the professional nurse including provider of care, teacher, manager, and research consumer. Students develop communication skills used in professional nursing.

NUR 203 Health Assessment 2+1, 3 Cr
Clinical practice in assessment skills of persons across the life-span. Emphasis is placed on those communication and psychomotor techniques that are fundamental for an organized and comprehensive health assessment relating to the nursing process.

NUR 210 Therapeutic Interventions for the Professional Nurse 2+2, 4 Cr.
An introduction to the concepts and principles of therapeutic and pharmacological interventions applied by the professional nurse in a dynamic health care environment. Prerequisites: NUR 201 and NUR 203.

NUR 212 Introduction to Community-Based Nursing and Health Promotion 2.5+0.5, 3 Cr.
Focuses on health promotion and the influence of diversity among persons living within the United States. This course is open to all University students with a sophomore standing or above and could be of benefit to students considering careers in theology, psychology, church work, social work, medicine, occupational, or physical therapies. A service learning component is included that will provide experiences in interfaith community-based health promotion activities. Prerequisites for nursing students: NUR 201 and NUR 203.

NUR 275 Transition to Professional Nursing
4 Cr .
Concepts relevant to professional nursing are discussed and applied. Explores the expanding role of the professional nurse including provider of care, teacher, manager, and research consumer while emphasizing the process of communication, critical thinking, change, and lifelong learning. Prerequisite: licensed as an R.N.

Note: Prerequisites for the following courses are NUR 201, 203, 210, and 212, BIO 210 and a cumulative and nursing grade point average of 2.5 or above.

NUR 325 Nursing Care of the Childbearing Family $3+2,5 \mathrm{Cr}$.
The study and practice of professional nursing with a focus on childbearing women, families, and newborns at all levels of prevention. Emphasis is placed on a family-centered approach in community settings.

NUR 341 Psychiatric Mental Health Nursing 3+2,5 Cr.
The application of psychiatric mental health nursing principles in the care of persons who have been impacted by psychiatric disturbances. Using psychobiological and behavioral theories and therapeutic communication skills, emphasis is placed on the promotion of optimal mental health functioning for individuals, families, and communities.

## NUR 351/551 Gerontological Nursing

2.5+0.5, 3 Cr .

This course focuses on gerontological nursing. Theories and various dimensions of aging are discussed. Normal biological aging, attitudes towards aging, health issues facing the elderly, and nursing interventions to promote quality care for older adults will be explored. Service learning activities will promote a holistic understanding of the aging process.

NUR $354 \quad$ Nursing Care of Adults I
$3+2,5 \mathrm{Cr}$.
Concentrates on the development of professional nursing practice with adults experiencing acute and chronic changes in health. Emphasis is placed on meeting the health needs of these adults and their families in a variety of environments at all levels of prevention.

NUR 356 Nursing Care of Adults II
$3+2,5 \mathrm{Cr}$.
A continuation of Nursing Care of Adults I. Concentrates on the development of professional nursing practice with adults experiencing acute and chronic changes in health. Emphasis is placed on meeting the health needs of these adults and their families in a variety of environments at all levels of prevention.

NUR 360 Interprofessional Service Learning in Health in Central America $1+2,3 \mathrm{Cr}$.
This course focuses on the application of principles from international health, public health, and community-based participatory action to population-based health care services in rural Central America. Emphasis is placed on assessing, diagnosing, planning, and evaluating health and implementing strategies at all levels of prevention during this service learning experience. As a member of an interprofessional health care team, students will explore the roles of public health professionals in collaboration with local care providers in the provision of services to disparous populations. Maybe used to fulfill Cultural Diversity course component of the General Education requirements. Corequisite: must attend the service learning trip to Central America.

NUR 381 Cooperative Education in Nursing $\quad 1-3 \mathrm{Cr}$.
Application of the concepts of professional nursing in a health care setting. Requires satisfactory work performance for a preselected employer and submission of a final project. Prerequisite: NUR 210 and approval of the dean. May be taken on S/U basis.

NUR 390 Topics in Nursing and Health Care 1-3 Cr.
An open topic course which may cover specialized areas of nursing, current concepts, nursing concerns of delivery of health services. The course may be taken more than once for a maximum of six credit hours provided there is not duplication of topics. Prerequisites: determined by the instructor. Selected topics offered to non-nursing majors. May be taken on the S/U grade basis.

NUR 395 Independent Study in Nursing 1-6 Cr.
Independent study of a selected topic. Prerequisite: determined by the instructor. May be taken on S/U basis. May be repeated for additional credit. Prerequisite: approval of the dean of the college.

Note: Prerequisites for the following courses are NUR 325, 341, 354, 356 (or 275) and a cumulative and nursing grade point average of 2.5 or above.

NUR 415 Introduction to Nursing Research for Evidence-Based Practice
An overview of scientific research as applied to nursing and the role of the professional nurse as a research consumer. The course includes the study of the research process and implications of findings for evidenced-based nursing practice. Prerequisite: PSY 201 or equivalent.

Provides the student with the opportunity to explore cultural, economic, ethical, legal, political, social, and technological issues in health care from a global perspective. The course will include a comparative analysis of selected health care delivery systems from around the world. This course is open to all University students with junior standing or above. May be used to fulfill the Cultural Diversity course component of the General Education requirements.

NUR 425 Nursing Care of the Childrearing Family $3+2,5 \mathrm{Cr}$.
The study and practice of professional nursing care of children in a variety of settings. Using a family-centered approach, students engage with children and their families at all levels of prevention. Prerequisite: PSY 215 or equivalent.

NUR 458 Complex Health Care Needs of Adults 2.5+1.5, 4 Cr .
This course focuses on professional nursing care necessary for adults experiencing complex health needs. Emphasis is placed on meeting the multiple requisites of these adults and their families in rehabilitation and critical care settings.

NUR $460 \quad$ Public Health Nursing
$3+2,5 \mathrm{Cr}$.
Focuses on the roles of the public health nurse in providing care at all levels of prevention to individuals, families, and aggregates at home and in other community settings. Emphasis is placed on the synthesis of knowledge in nursing, public health, humanities, and sciences as students apply the nursing process to promote and preserve the health of a community and its members. Students will have the opportunity to explore the role of the public health nurse as a member of an interdisciplinary health care team.

NUR $470 \quad$ Management and Leadership Strategies for the Professional Nurse 3 Cr .
An overview of management and leadership theories as applied by professional nurses in health care environments. Roles and functions of the management process including planning, organizing, staffing, directing, and controlling are explored. Synthesis of the role components of the professional nurse and strategies for managing a career are emphasized.

NUR 480 Professional Role Practicum $1+4,5 \mathrm{Cr}$.
A course which facilitates the transition from student to beginning professional nurse. Within a clinical setting, students integrate knowledge from nursing and the arts and sciences to assist persons to achieve health. Only offered on $S / U$ grade basis. All degree requirements must be met prior to beginning clinical practicum experience. Spring Prerequisite or Corequisite: NUR 458 and NUR 460; Summer Prerequisite or Corequisite: NUR 470.
NUR $490 \quad$ Topics in Nursing and Health Care $\quad 1-3 \mathrm{Cr}$. An open topic course which may cover specialized areas of nursing, current concepts, nursing concerns of delivery of health services. The course may be taken more than once for a maximum of six credit hours provided there is not duplication of topics. Prerequisites: determined by the instructor. Selected topics offered to non-nursing majors. May be taken on the S/U grade basis.

Independent study of a selected topic. Prerequisite: determined by the instructor. May be taken on $\mathrm{S} / \mathrm{U}$ basis. May be repeated for additional credit. Prerequisite: approval of the dean of the college.

## Health Care Leadership

Professor N. Schmidt; Associate Professor Genovese (Program Director); Assistant Professors Blodgett, Cavinder, Coto, Rayman; Clinical Assistant Professors Migler, Zart.

The Bachelor of Science in Health Care Leadership program prepares students to be health care leaders by providing theoretical and experiential learning focused on critical knowledge associated with setting vision, guiding change, leading teams and inspiring people within health care.

Once admitted, students take 52 credits culminating in a five-credit experience in a health care organization in the local community. Courses focus on the knowledge domains identified in the National Center for Healthcare Leadership competency model: communication, leadership, professionalism, knowledge of the health care environment, and stimulating the change process.

## Purpose

The purpose of the health care leadership program is to develop graduates who will function in diverse leadership positions within varied health care environments.

## Objectives

The B.S. in Health Care Leadership graduate will:

1. Demonstrate proficiency in the knowledge and skills required for positions of professional leadership in the health care industry.
2. Characterize leadership skills of service minded, purpose driven, ethical decision making, empowering individuals and visionary perspectives.
3. Appreciate how the environmental influences of culture, economics, ethics, law, policy, politics, society, and technology impact the intersection of individuals within the health care industry.
4. Promote the health of persons in dynamic health care environments.

## Bachelor of Science in Health Care Leadership Degree (Minimum 124 Cr.)

Health Care Leadership $52 \mathbf{~ C r}$.

HCL 103 Historical Perspectives in Health Care 3 Cr .
HCL 105 Fundamentals of Health Care Leadership 3 Cr .
HCL 1213 Cr.
HCL 153 Communication Process in Health Care Leadership I 4 Cr.
HCL $211 \quad 3 \mathrm{Cr}$.
HCL 213 Social, Behavioral, and Cultural Factors in Health Care Leadership 3 Cr.
HCL 233 Educational Delivery in Health Care 3 Cr.
HCL 255 Communication Process in Health Care Leadership II 4 Cr .
HCL 301 Health Care Strategic Planning 3 Cr.
HCL 302 Health Care Ethics and Legal Issues 3 Cr .
HCL 303 Health Care Management Information Systems 3 Cr.
HCL 304 Introduction to Epidemiology 3 Cr .
HCL $415 \quad$ Introduction to Research in Health Care 3 Cr .
HCL 418 Global Health lssues 3 Cr .
HCL 470 Health Care Leadership Strategies 3 Cr .
HCL 480 Health Care Leadership Practicum 5 Cr .
Arts and Sciences 51 Cr .
CORE 110 The Human Experience 5 Cr .
CORE 115 The Human Experience 5 Cr .
THEO 200 The Christian Tradition 3 Cr .
Upper Level Theology 3 Cr .

ENGL $205 \quad$ Writing in the Health Sciences 3 Cr .
One of the following options:
KIN 100 Healthy Lifestyles 1 Cr .
KIN 101 Wellness and Stress 1 Cr .
Humanities Elective 3 Cr .
CHEM 111 Introduction to Chemistry $3+2,4 \mathrm{Cr}$.

BIO 151 Human Anatomy and Physiology I 3+3, 4 Cr .
BIO 152 Human Anatomy and Physiology II 3+3, 4 Cr .
BIO 210 Microbiology $3+3,4 \mathrm{Cr}$.
BIO 260 Human Nutrition 3 Cr .
PSY 110 General Psychology 3 Cr .
PSY 201 Statistical Methods 3 Cr .
PSY 215 Lifespan Development 3 Cr .
Electives $\quad 21 \mathrm{Cr}$.

Nine credits from the following guided elective options:
ACC 205 Financial Accounting 3 Cr .
BLAW 104 Legal Environment of Business 3 Cr .
COMM 244 Persuasion and Advocacy 3 Cr .
COMM 311 Organizational Communication 3 Cr .

College of Nursing and Health Professions

| COMM 345 | Leadership Communication | 3 Cr . |
| :---: | :---: | :---: |
| COMM 360 | Strategic Communication and Technology | 3 Cr . |
| COMM 365 | Corporate Advocacy and Activist Communication | 3 Cr . |
| ECON 136 | The Economics of Health, Education, and Welfare | 3 Cr . |
| ECON 210 | Environmental Economics and Policy | 3 Cr . |
| ECON 221 | Principles of Microeconomics | 3 Cr . |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| GEO 201 | Economic Geography | 3 Cr . |
| GEO 280 | Geography of Cyberspace | 3 Cr . |
| GEO 320 | Urban Geography | 3 Cr . |
| GEO 321 | Urban and Regional Planning | 3 Cr . |
| GEO 420 | Rural Geography | 3 Cr . |
| PHIL 130 | Death and Immortality | 3 Cr . |
| POLS 120 | The Government of the United States | 3 Cr . |
| POLS 130 | Comparative Politics | 3 Cr . |
| POLS 361 | Public Policy | 3 Cr . |
| PSY 235 | Abnormal Psychology | 3 Cr . |
| SOC 210 | Contemporary Social Problems | 3 Cr . |
| SOC 220 | The Family | 3 Cr . |
| SOC 245 | Social Psychology | 3 Cr . |
| SOC 255 | Sociology of Health and Health Care | 3 Cr . |
| SOC 260 | Deviance | 3 Cr . |
| SOC 270 | Juvenile Delinquency | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOCW 151 | Introduction to the Profession of Social Work | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| SOCW 220 | Human Behavior and Social Development | 3 Cr . |
| SOCW 240 | Communication and Counseling Skills | 3 Cr . |
| Twelve open Elective credits |  | 12 Cr . |

## Health Care Leadership Minor (Minimum 15 Cr.)

On a smaller scale than the major, the minor in Health Care Leadership provides a foundation for students desiring to explore a career in health care. A student interested in this minor should consult with his or her academic advisor as soon as possible to plan a course of study.

| Required Courses: |  |  |
| :---: | :---: | :---: |
| HCL 103 | Historical Perspectives in Health Care | 3 Cr . |
| HCL 105 | Fundamentals of Health Care Leadership | 3 Cr . |
| Two courses from the following options: |  |  |
| HCL 153 | Communication Process in Health Care I | 4 Cr . |
| HCL 211 | Principles of Health Care Supervision | 3 Cr . |
| HCL 301 | Health Care Strategic Planning | 3 Cr . |
| HCL 302 | Health Care Ethics \& Legal Issues | 3 Cr . |
| HCL 303 | Health Care Management Information Systems | 3 Cr . |
| One course from the following options: |  |  |
| HCL 121 | Environment and Health | 3 Cr . |
| HCL 213 | Social, Behavioral, and Cultural Factors in Health Care | 3 Cr . |
| HCL 233 | Educational Delivery in Health Care | 3 Cr . |
| HCL 255 | Communication Process in Health Care II | 4 Cr . |
| HCL 418 | Global Health Issues (also NUR/HS/PHS 418) | 3 Cr . |

## Requirements for Admission to the Health Care Leadership program

Freshman students who have declared Health Care Leadership as their major will be admitted directly into the health care leadership program. The general requirements for admission to the University are found in this catalog.

## Progression

Students must maintain a minimum grade point average of 2.0 to progress in the program. A student must earn a C- or better in all Health Care Leadership (HCL) courses. A health care leadership course may not be repeated more than once.

## Minor

A health care leadership student may declare a minor in another college. The minor is noted on the student's academic record.

## Course Intensification

A health care leadership student may propose a special project for earning one extra credit in one health care leadership course in which they are enrolled in a given semester. The following regulations pertain to this option for a student;

1. Student must have a health care leadership GPA of 2.5 or above.
2. The course must be offered in the College of Nursing and Health Professions for 3 or more credits.
3. Student must meet with the academic advisor to determine if course intensification is appropriate. The initiative and responsibility for developing a satisfactory proposal lies with the student.
4. Student must obtain the advisor's signature on the petition to intensify a course.
5. Student must submit a one-page proposal for the intensification project and the petition to the instructor of the course for approval.
6. Student must submit the approved proposal for the intensification project and the petition to the dean for approval.

## Transportation

Students are responsible for providing their own transportation to and from all community agency and practicum experiences. Access to a car is necessary for the practicum course.

## Health Care Leadership Student Association (HCLSA)

All HCL students are invited to join HCLSA.

## Bachelor of Science in Health Care Leadership/ Master's of Health Administration 4+1 Degree (Minimum 124 Cr.)

During the junior year, students who have a 3.0 cumulative GPA, who have a 3.0 GPA in the required health care leadership courses, who have not earned grades of less than C in science courses and courses required for the health care leadership major, and who have completed the program of study through the junior year, will be invited to enroll in the $4+1$ program.

## Admission Requirements

Students who are admitted into the HCL/MHA 4+1 during their senior year will be admitted directly into the MHA program upon graduation from their HCL program assuming they continue to meet the progression requirements.

## Progression

Requirements for progression include maintenance of a cumulative GPA of at least 3.0 average in all graduate level classes, and no grades of less than B- in any required graduate courses.

| Health Care Leadership |  | 60 Cr . |
| :---: | :---: | :---: |
| HCL 103 | Historical Perspectives in Health Care | 3 Cr . |
| HCL 105 | Fundamentals of Health Care Leadership | 3 Cr . |
| HCL 121 | Environment and Health | 3 Cr . |
| HCL 153 | Communication Process in Health Care Leadership I | 4 Cr . |
| HCL 211 | Principles of Health Care Supervision | 3 Cr . |
| HCL 213 | Social, Behavioral, and Cultural Factors in Health Care Leadership | 3 Cr . |
| HCL 233 | Educational Delivery in Health Care | 3 Cr . |
| HCL 255 | Communication Process in Health Care Leadership II | 4 Cr . |
| HCL 301 | Health Care Strategic Planning | 3 Cr . |
| HCL 302 | Health Care Ethics and Legal Issues | 3 Cr . |
| HCL 303 | Health Care Management Information Systems | 3 Cr . |
| HCL 304 | Introduction to Epidemiology | 3 Cr . |
| HCL 415 | Introduction to Research in Health Care | 3 Cr . |
| HCL 470 | Health Care Leadership Strategies | 3 Cr . |
| HCL 480 | Health Care Leadership Practicum | 5 Cr . |
| HADM 501 | Understanding the Profession and Health Care Organizations | 2 Cr . |
| HADM 518 | Global Health Issues | 3 Cr . |

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| HADM 601 | Research and Program Evaluation | 3 Cr . |
| :---: | :---: | :---: |
| HADM 675 | Organizational and Government Policy in Health Care | 3 Cr . |
| Arts and Sciences |  | 51 Cr. |
| CORE 110 | The Human Experience | 5 Cr . |
| CORE 115 | The Human Experience | 5 Cr . |
| THEO 200 | The Christian Tradition | 3 Cr . |
| Upper Level Theology |  | 3 Cr . |
| ENGL 205 | Writing in the Health Sciences | 3 Cr . |
| One of the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr. |
| KIN 101 | Wellness and Stress | 1 Cr . |
| Humanities Elective |  | 3 Cr . |
| CHEM 111 | Introduction to Chemistry | $3+2,4 \mathrm{Cr}$. |
| BIO 151 | Human Anatomy and Physiology I | 3+3, 4 Cr . |
| BIO 152 | Human Anatomy and Physiology II | $3+3,4 \mathrm{Cr}$. |
| BIO 210 | Microbiology | $3+3,4 \mathrm{Cr}$. |
| BIO 260 | Human Nutrition | 3 Cr . |
| PSY 110 | General Psychology | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| PSY 215 | Lifespan Development | 3 Cr . |
| Electives |  | 13 Cr . |
| Nine credits from the following guided elective options: |  |  |
| ACC 205 | Financial Accounting | 3 Cr . |
| BLAW 104 | Legal Environment of Business | 3 Cr . |
| COMM 244 | Persuasion and Advocacy | 3 Cr . |
| COMM 311 | Organizational Communication | 3 Cr . |
| COMM 345 | Leadership Communication | 3 Cr . |
| COMM 360 | Strategic Communication and Technology | 3 Cr . |
| COMM 365 | Corporate Advocacy and Activist Communication | 3 Cr . |
| ECON 136 | The Economics of Health, Education, and Welfare | 3 Cr . |
| ECON 210 | Environmental Economics and Policy | 3 Cr . |
| ECON 221 | Principles of Microeconomics | 3 Cr . |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| GEO 201 | Economic Geography | 3 Cr . |
| GEO 280 | Geography of Cyberspace | 3 Cr . |
| GEO 320 | Urban Geography | 3 Cr . |
| GEO 321 | Urban and Regional Planning | 3 Cr . |
| GEO 420 | Rural Geography | 3 Cr . |
| PHIL 130 | Death and Immortality | 3 Cr . |
| POLS 120 | The Government of the United States | 3 Cr . |
| POLS 130 | Comparative Politics | 3 Cr . |
| POLS 361 | Public Policy | 3 Cr . |
| PSY 235 | Abnormal Psychology | 3 Cr . |
| SOC 210 | Contemporary Social Problems | 3 Cr . |
| SOC 220 | The Family | 3 Cr . |
| SOC 245 | Social Psychology | 3 Cr . |
| SOC 255 | Sociology of Health and Health Care | 3 Cr . |
| SOC 260 | Deviance | 3 Cr . |
| SOC 270 | Juvenile Delinquency | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOCW 151 | Introduction to the Profession of Social Work | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| SOCW 220 | Human Behavior and Social Development | 3 Cr . |
| SOCW 240 | Communication and Counseling Skills | 3 Cr . |
| Three to four open elective credits |  |  |

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| Health Administration |  | 34 Cr . |
| :---: | :---: | :---: |
| HADM 520 | Financial Management | 2 Cr . |
| HADM 550 | Human Resource Management | 2 Cr . |
| HADM 602 | Managing and Analyzing Health Care Information | 3 Cr . |
| HADM 640 | Quality Health Care Management | 3 Cr . |
| HADM 650 | Leadership and Managing People | 2 Cr . |
| HADM 670 | Legal Issues in Health Care | 3 Cr . |
| HADM 671 | Ethical Issues in Health Care | 3 Cr . |
| HADM 685 | Practicum | 3 Cr . |
| HADM 686 | Internship | 3 Cr . |
| Two courses from the following core enhancement options: |  | 5-6 Cr. |
| HADM 530 | Marketing and Promotion | 2 Cr . |
| HADM 662 | Health in the Community | 3 Cr . |
| HADM 664 | International Health and Health Care Organizations | 3 Cr . |
| Five to six graduate elective credits from business, health, information technology, professional writing, ethics, and other fields. |  | 5-6 Cr. |

## Health Care Leadership Courses

## HCL 103 Historical Perspectives in Health Care

Introduces the history of health care in its social context, from the 18th century to present day. The class will explore health care system evolution in the context of patient/practitioner relationships, examine changing ideas concerning health, sickness, and disease, and chart the changes in health care and health care education.

HCL 105 Fundamentals of Health Care Leadership 3 Cr.
An overview of the scope of leadership styles necessary for effective outcomes in various health care environments. Examines the role of the health care leader in promoting an environment that allows for the well-being of both the individual and the organization. Learners identify, interpret, and analyze their individual leadership attitudes, abilities, styles, and strengths.

HCL 121 Environment and Health 3 Cr.
Explores health and environmental controversies from the dual perspectives of scientific uncertainty and mass media coverage. Examines environmental health risks and human behavior. Includes discussion of ethical and social responsibilities from a health care system perspective.

HCL 153 Communication Process in Health Care Leadership I 4 Cr. Introduces the communication process as related to health care organizational settings. An emphasis will be placed on the examination of interpersonal interaction of dyads and groups. Also focuses on listening skills, decision making, and conflict resolution processes in profit and nonprofit health care systems. Exploration of the practices, skills, and tools necessary to focus on the leader as the communication champion. Prerequisite: HCL 105.

## HCL 211 Principles of Health Care Supervision <br> 3 Cr .

Identifies supervision as a component in the leadership process of the organizational context of health care. Developmental experiences of supervision and leadership are incorporated into class simulations, exercises, and other healthcare scenarios. Prerequisite: HCL 105.

Social, Behavioral, and Cultural Factors in Health Care Leadership care management system. Focuses on the need for health care industry leaders to be culturally competent to lead a diverse work group.

Introduction to Research in Health Care
3 Cr .
Describes the systematic steps of the research process. Introduces approaches, frameworks, and concepts used in investigating health care problems. Emphasizes integration of research findings to establish evidence-based health care practices.
Educational Delivery in Health Care
3 Cr .
Examines educational forces shaping global and personal perspectives throughout the world. Includes trends in technology, economics, politics, culture, and religion as related to worldwide education delivery that shapes global and personal health care perspectives.

Communication Process in Health Care Leadership II 4 Cr .
Explores the societal impact of the communication process on health care programs and policies. Topic discussion will include the communicative process as used in the developmental approach to health care initiatives; public sector plans; managed care; the employer sponsored system; medically uninsured; and health care vested interest groups. Prerequisites: HCL 153 and HCL 211.

Global Health Issues
3 Cr .

Provides the student with the opportunity to explore cultural, economic, ethical, legal, political, social, and technological issues in health care from a global perspective. The course will include a comparative analysis of selected health care delivery systems from around the world. This course is open to all University students with junior standing or above. May be used to fulfill the Cultural Diversity course component of the General Education requirements.

Emphasizes essential health care leadership competencies by focusing on communication, collaboration, change mastery, and conflict resolution. Focuses on organizational structures and systems, leading change and innovation, development of values-based cultures, the art of successful acquisition approaches, centralized and decentralized management, and leadership styles. Provides opportunity to discover one's own leadership abilities with respect to each of the discussed competencies.

HCL 480 Health Care Leadership Practicum 5 Cr .
Provides experiential opportunities to demonstrate professional behaviors. The practicum course is designed to explore the role of health care leader in an organizational or community setting. Students collaborate with faculty and preceptors to examine the role of the health care leader.
Topics in Health Care Leadership
$1-3 \mathrm{Cr}$.
An open topic course which may cover specialized areas of health care leadership, current concepts and concerns of delivery of health services. The course may be taken more than once for a maximum of six credit hours provided there is not duplication of topics. Prerequisites: determined by the instructor. Selected topics offered to non-health care leadership majors. May be taken on the S/U grade basis.

HCL 495 Independent Study in Health Care Leadership
1-6 Cr.
Independent study of a selected topic. Prerequisite: determined by the instructor. May be taken on $\mathrm{S} / \mathrm{U}$ basis. Prerequisite: approval of the dean of the college.

## Health Science

## Associate Professors A. Polito, Zaweski (Assistant Dean for the PA Program); Assistant Professors Blodgett, Cavinder, Li, Pinchok, Rayman; Clinical Assistant Professors Migler, Zart.

The Bachelor of Science in Health Science (BSHS) provides students with the prerequisite course work for entrance into the Master of Science in Physician Assistant Studies (MSPA). The curriculum is comprised of general education requirements, requirements for the major in health sciences, and courses that will provide the strong science background necessary for academic success in the MSPA program.

The BSHS program is a three-year, pre-professional program that will culminate in the awarding of a BSHS. In the BSHS program, students will follow a prescribed academic sequence consisting of liberal arts, preparatory science courses, and courses related to health care. Students who meet or exceed the progression and retention criteria for the degree will be directly admitted into the MSPA studies, the professional accredited component of Physician Assistant (PA) preparation.

## Purpose

The purpose of the BSHS degree is to prepare graduates to pursue positions within varied health care environments.

## Objectives

The B.S. in Health Science graduate will:

1. Demonstrate proficiency in foundational knowledge and skills required for physician assistants or other health care providers.
2. Engage in critical thinking, communication, change, and lifelong learning.
3. Integrate professional health care ethics, values, service, and leadership skills.
4. Evaluate the influences of culture, economics, ethics, law, policy, and technology on the health of persons.
5. Through experiential learning, promote the health of persons in dynamic health care environments.

| Bachelor of Science in Health Science Degree (Minimum 124 Cr.) |  |  |
| :---: | :---: | :---: |
| Health Science |  | 42 Cr . |
| HS 103 | Historical Perspectives in Health Care | 3 Cr . |
| HS 180 | Seminar I | 3 Cr . |
| HS 213 | Social, Behavioral, and Cultural Factors in Health Care | 3 Cr . |
| HS 253 | Communication Process in Health Care | 3 Cr . |
| HS 280 | Seminar II | 3 Cr . |
| HS 302 | Health Care Ethics and Legal Issues | 3 Cr . |
| HS 380 | Seminar III | 3 Cr . |
| HS 415 | Evidence-based Practice and Research Methods | 3 Cr . |
| HS 418 | Global Health Issues | 3 Cr . |
| HS 450 | Consumer Education for Health Promotion | 3 Cr . |
| HS 470 | Health Care Leadership Strategies | 3 Cr . |
| HS 480 | Seminar IV | 4 Cr . |
| HS 481 | Seminar V | 5 Cr . |
| Arts and Sciences |  | 67 Cr . |
| CORE 110 | The Human Experience | 5 Cr . |
| CORE 115 | The Human Experience | 5 Cr . |
| THEO 200 | The Christian Tradition | 3 Cr . |
| Upper Level Theology |  | 3 Cr . |
| ENGL 205 | Writing in the Health Sciences | 3 Cr . |
| One of the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| Humanities Elective |  | 3 Cr . |
| BIO 151* | Human Anatomy and Physiology I | $3+3,4 \mathrm{Cr}$. |
| BIO 152* | Human Anatomy and Physiology II | $3+3,4 \mathrm{Cr}$. |
| BIO 210* | Microbiology | $3+3,4 \mathrm{Cr}$. |
| BIO 260* | Human Nutrition | 3 Cr . |
| BIO 270* | Genetics and Genome Evolution | $3+3,4 \mathrm{Cr}$. |
| CHEM 121* | General Chemistry I | $3+3,4 \mathrm{Cr}$. |
| CHEM 122* | General Chemistry II | $3+3,4 \mathrm{Cr}$. |
| CHEM 221* | Organic Chemistry I | $3+3,4 \mathrm{Cr}$. |
| CHEM 222* | Organic Chemistry II | $3+3,4 \mathrm{Cr}$. |
| PSY 110* | General Psychology | 3 Cr . |
| PSY 201* | Statistical Methods | 3 Cr . |
| PSY 215* | Lifespan Development | 3 Cr . |
| Electives |  | 15 Cr . |
| *Grade of C (2.0) or better required |  |  |

## Requirements for Admission to the Health Science program

Freshman students who have been admitted to the Health Science program will be eligible for direct admission into the Master of Science in Physician's Assistant program assuming they meet the progression requirements and other criteria for the graduate program.

## Progression

Students must maintain a minimum cumulative grade point average of 3.0 , a minimum of 3.0 GPA in the required health science courses in the health science major, a 3.0 minimum GPA in all required lab science courses, and no grades of less than C (2.0) in all other required courses to remain in the program. Dismissal from the BSHS program will occur when a student commits two progression infractions. The following are considered infractions: earns a grade of less than $\mathrm{C}(2.0)$ in any required lab science course marked with *, earns a grade less than C (2.0) in any course with an HS number, GPA in required lab science courses falls below 3.0, GPA in courses with HS number falls below 3.0, and/or cumulative GPA falls below 3.0.

## Minor

A health science student may declare a minor in another college provided that no more than six credit hours of courses required for the Health Science major are used in fulfilling requirements of the minor. The minor is noted on the student's academic record.

## 5 Year Physician Assistant Club (5PAC)

All health science students are invited to join 5PAC.

## Transportation

Students are responsible for transportation to and from all field experiences. Students will be required to participate in a wide range of experiences, consequently, access to a car is necessary in most field experience courses.

## Health Science Courses

HS 103 Historical Perspectives in Health Care 3 Cr .
Introduces the history of health care in its social context, from the 18th century to present day. The class will explore health care system evolution examining changing ideas concerning health, sickness and disease, and the delivery of health care.

HS 180 Field Experience I $1+2,3 \mathrm{Cr}$.
This course introduces medical terminology and provides opportunities for experience in a health care setting either through volunteerism or employment. Requires completion of 24 clock hours within the clinical setting. S/U grade.

Social, Behavioral, and Cultural Factors in Health Care
3 Cr .
Investigates the racial, ethnic, gender, and generational disparities that create socio-cultural barriers in the health care system. Focuses on the need for health care providers to provide culturally competent care.

HS 253 Communication Processes in Health Care 3 Cr.
Introduces communication processes involving health service organizational settings. An emphasis will be placed on the examination of interpersonal communication. Also focuses on listening skills, decision making, and conflict resolution.

HS 280 Field Experience II 0+3, 3 Cr .
This course provides opportunities for experience in a health care setting either through volunteerism or employment. Requires completion of 36 clock hours within the clinical setting. S/U grade. Prerequisite HS 180.

HS 300 Writing in the Discipline 3 Cr .
This course offers a detailed study of writing for effective communication in health care. Prerequisite HS 180.
HS 302 Health Care Ethics and Legal Issues 3 Cr .
Examines ethical and legal issues in patient care affecting health care providers. Professional values and service are emphasized.

Field Experience III
$0+3,3 \mathrm{Cr}$.
This course provides opportunities for experience in a health care setting either through volunteerism or employment. Requires completion of 36 clock hours within the clinical setting. S/U grade. Prerequisite HS 280.

HS 415 Evidence-Based Practice and Research Methods 3 Cr .
Emphasizes the integration of research findings to establish evidence-based practices.
Global Health Issues
3 Cr.
Provides the student with the opportunity to explore cultural, economic, ethical, legal, political, social, and technological issues in health care from a global perspective. The course will include a comparative analysis of selected health care delivery systems from around the world. This course is open to all University students with junior standing or above. May be used to fulfill the Cultural Diversity course component of the General Education requirements.

Consumer Education for Health Promotion
Applies teaching and learning principles to promote the health of individuals across the wellness-illness continuum. Explores issues such as health literacy, health behavior change, and the use of technology for consumer health education. Prerequisite: HS 253.

This course provides opportunities for experience in a health care setting either through volunteerism or employment. Requires completion of 48 clock hours within the clinical setting. S/U grade. Prerequisite HS 380.

Field Experience V
This seminar course provides opportunities for experience in a health care setting either through volunteerism or employment. Requires completion of 60 clock hours within the clinical setting. $\mathrm{S} / \mathrm{U}$ grade. All degree requirements must be met prior to beginning this capstone course. Prerequisite HS 480.

## Public Health

## Associate Professor Cory (Program Director); Assistant Professor Li.

The Bachelor of Science in Public Health (BSPH) program prepares students in a community of learning, dedicated to excellence and grounded in the Lutheran tradition, to lead and serve in the field of public health to promote health and prevent disease in human populations.

The interdisciplinary curriculum is designed to prepare entry level public health practitioners with knowledge, skills, and attitudes in the core concepts of public health including health behavior, health services administration, environmental health, epidemiology, and statistics as well as in the ability to identify, assess, plan, implement, and evaluate the needs of populations to promote and protect the health of the community. The BSPH courses provide the strong science background necessary for academic success in the MPH program.

## Purpose

The purpose of the BSPH degree is to prepare graduates to pursue entry-level positions within varied public health settings.

## Objectives

The B.S. in Public Health graduate will:

1. Demonstrate proficiency in foundational knowledge and skills required for public health professionals.
2. Engage in the processes of critical thinking, communication, change, and lifelong learning.
3. Integrate public health ethics, values, service, and leadership skills.
4. Evaluate the influences of culture, economics, ethics, law, policy, politics, society, and technology on a population's health.
5. Promote the health of populations in dynamic public health environments through experiential learning.

## Bachelor of Science in Public Health Degree (Minimum 124 Cr.)

| Public Health |  | 55 Cr . |
| :---: | :---: | :---: |
| PHS 101* | Introduction to Public Health | 3 Cr . |
| PHS 121* | Environment and Health | 3 Cr . |
| PHS 203* | Human Health and Disease | 3 Cr . |
| PHS 207* | Public Health Education and Promotion | 3 Cr . |
| PHS 210* | Prevention in Population Health | 3 Cr . |
| PHS 304* | Introduction to Epidemiology | 3 Cr . |
| PHS 307* | Public Health Communication | 3 Cr . |
| PHS 315* | Introduction to Research in Public Health | 4 Cr . |
| PHS 318* | Health Services Leadership and Administration | 3 Cr . |
| PHS 370* | Program Planning and Evaluation | 5 Cr . |
| PHS 413* | Social, Behavioral, and Cultural Factors in Health Care | 3 Cr . |
| PHS 418* | Global Health Issues | 3 Cr . |
| PHS 421* | Environmental Health for a Sustainable Future | 3 Cr . |
| PHS 460* | Public Health Advocacy | 3 Cr . |
| PHS 470* | Public Health Practicum | 5 Cr . |
| PHS 480* | Public Health Capstone | 5 Cr . |
| Arts and Sciences |  | 60 Cr . |
| CORE 110 | The Human Experience | 5 Cr . |
| CORE 115 | The Human Experience | 5 Cr . |


| THEO 200 | The Christian Tradition | 3 Cr . |
| :---: | :---: | :---: |
| Upper Level Theology |  | 3 Cr . |
| ENGL 205 | Writing in the Health Sciences | 3 Cr . |
| One of the following options: |  |  |
| KIN 100 | Healthy Lifestyles | 1 Cr . |
| KIN 101 | Wellness and Stress | 1 Cr . |
| Humanities Elective |  | 3 Cr . |
| COMM 243 | Public Communication | 3 Cr . |
| BIO 151* | Human Anatomy and Physiology I | 3+3, 4 Cr . |
| BIO 152* | Human Anatomy and Physiology II | 3+3, 4 Cr . |
| BIO 210* | Microbiology | 3+3, 4 Cr . |
| BIO 260* | Human Nutrition | 3 Cr . |
| One course from the following options: |  |  |
| CHEM 111* | Introduction to Chemistry | 3+3, 4 Cr . |
| CHEM 121* | General Chemistry I | 3+3, 4 Cr . |
| CHEM 131* | General Chemistry I - Honors | 3+3, 4 Cr . |
| PSY 110* | General Psychology | 3 Cr . |
| PSY 201* | Statistical Methods | 3 Cr . |
| PSY 215* | Lifespan Development | 3 Cr . |
| SOC 390* | Medical Sociology | 3 Cr . |
| Electives |  | 12 Cr . |

* Courses marked with an asterisk require a C grade or better.


## Public Health Minor (Minimum 15 Cr.)

| Public Health |  | 12 Cr . |
| :---: | :---: | :---: |
| PHS 101 | Introduction to Public Health | 3 Cr . |
| PHS 121 | Environment and Health (also HCL 121) | 3 Cr . |
| PHS 304 | Introduction to Epidemiology (also HCL 304) | 3 Cr . |
| PHS 418 | Global Health Issues (also NUR/HCL/HS 418) | 3 Cr . |
| One course from the following options: |  | 3 Cr . |
| PHS 207 | Public Health Education and Promotion | 3 Cr . |
| PHS 210 | Prevention in Population Health | 3 Cr . |
| PHS 318 | Health Services Leadership and Administration | 3 Cr . |
| PHS 460 | Health Advocacy | 3 Cr . |
| Note: PSY 215 is a prerequisite for PHS 210. |  |  |

## Admission Requirements

Freshman students who have declared public health as their major will be admitted directly into the public health program.
Students in the BSPH program who are eligible for admission to the BSPH/MPH 4+1 option will be invited to enroll in graduate level public health courses in their senior year if they have a 3.0 GPA , have earned grades of a $C$ or better in science courses and courses required for the public health major, and have completed the program of study through the junior year. Students who are admitted into the BSPH/MPH 4+1 during their senior year will be admitted directly into the MPH upon graduation from the BSPH assuming they continue to meet the progression requirements.

## Progression

Requirements for progression for the BSPH include maintenance of a cumulative GPA of at least 2.5 in all course work, a 2.5 minimum average in all required public health courses in the public health major, and no grades of less than C (2.0) in any required courses. Dismissal from the public health program occurs when a student earns a grade of less than 2.0 in any two of the following courses: required courses with a public health number, BIO 151, BIO 152, BIO 210, BIO 260, CHEM 111/121/131, PSY 110, PSY 201, and SOC 390 . No public health course may be repeated more than once. Requirements for progression into the MPH program include maintenance of a cumulative GPA of at least 3.0, a 3.0 minimum average in all graduate level courses, and no grades of less than a B- in any required graduate course.

## Minor

A public health student may declare a minor in another college provided that no more than six credit hours of courses required for the Public Health major are used in fulfilling requirements of the minor. The minor is noted on the student's academic record.

## Course Intensification

A public health student may propose a special project for earning one extra credit in one public health course towards the required 12 elective credits for the Bachelor of Science in Public Health degree. The following regulations pertain to this option for a student:

1. Student must have a public health GPA of 2.7 or above
2. The course must be offered in the College of Nursing and Health Professions for three or more credits.
3. Student must meet with the academic advisor to determine if course intensification is appropriate. The initiative and responsibility for developing a satisfactory proposal lie with the student.
4. Student must obtain the advisor's signature on the Petition to Intensify a Course.
5. Student must submit a one-page proposal for the intensification project and the petition to the instructor of the course for approval.
6. Student must submit the approved proposal for the intensification project and the petition to the dean for approval.

Note: Students are responsible for transportation to and from all practicum and community agencies and for transportation associated with home visits. The College of Nursing and Health Professions uses a variety of accredited health facilities to provide broad practicum experience for students; consequently, access to a car is necessary in most practicum experiences.

## Public Health Courses

PHS 101 Introduction to Public Health 3 Cr .
Introduction to aspects of best practice of public health, including public health services, administration, and policy, environmental health, community health, and health promotion and education. This course is open to all University students.

PHS 121

Prevention in Population Health
3 Cr .
Introduction to the clinical basis of preventive health care, including human growth and development, nutrition, and immunology. Overview of the goals and methods used for disease prevention. Prerequisite: PSY 215.

Introduction to Epidemiology
Provides an introduction to epidemiologic methods and concepts as used in public health practice and research. Examines documentation of variation in disease occurrence in different populations, rates, and their uses to infer varying degrees of causality, bias, and study design.

PHS $307 \quad$ Public Health Communication
Introduction to theory and research on communication in public health, focusing on how messages from interpersonal, organizational, cultural, and media sources affect health beliefs and behaviors. This course explores communication in public health, health promotion, and disease prevention through informatics and information literacy.

PHS 315 Introduction to Research in Public Health
Overview of the systematic steps of the research process and the role of the public health professional as a research consumer. Emphasizes integration of research findings to establish evidence-based public health practices. The course includes the study of community-based participatory research. Prerequisite: PSY 201.

Introduction to the basic concepts of public health leadership and management in health service organizations, administration, and health policy in developed, developing, and underdeveloped countries.

Program Planning and Evaluation
$3+2,5 \mathrm{Cr}$
Explores the role of public health programs in the community, including needs assessment, program planning, implementation, and evaluation. Students will develop a public health program in collaboration with a public health agency.

PHS 415/513 Social, Behavioral, and Cultural Factors in Health Care 3 Cr
Examines theoretical relationships among the social context, behavior, and health at the intrapersonal, interpersonal, and community levels. Identifies key social and behavioral determinants of health in the United States and throughout the world.

PHS $418 \quad$ Global Health Issues
3 Cr .
Provides the student with the opportunity to explore cultural, economic, ethical, legal, political, social, and technological issues in health care from a global perspective. The course will include a comparative analysis of selected health care delivery systems from around the world. This course is open to all University students with junior standing or above. May be used to fulfill the Cultural Diversity course component of the General Education requirements.

PHS 421/521 Environmental Health for a Sustainable Future
3 Cr .
Examines the connection between public health and environmental exposures to biological, chemical, and physical agents. Through the use of problem-solving frameworks, students become familiar with assessment, planning, action, evaluation, and policy necessary to address environmental impacts on public health. This course will integrate concepts of environmental health with principles of sustainability to examine how policy and practice on the local, state, national, and global levels affect population health.

Focuses on the application of knowledge, skills, and attitudes about public health advocacy in the United States. Emphasis is placed on organizing, planning, implementing, and evaluating health advocacy for social change. Public health advocacy will be examined on local, state, and national levels. Students will explore the role of the advocate in global health systems and policy-making.

Public Health Practicum 3+2,5 Cr.
Provides students with an overview of field experiences in public health. Explores public health professional roles through representatives from various public health organizations. Students will implement their public health program in collaboration with a public health agency. Prerequisite: PHS 370.

Public Health Capstone

Integrates, synthesizes, and applies knowledge developed through the public health curriculum. Students will evaluate their public health program in collaboration with a public health agency. Prerequisite: PHS 470.

## Interdisciplinary Programs

Learn more about Interdisciplinary Programs at Valpo online.
The University encourages cooperation among the various branches of learning and is pleased to announce these programs which are designed to enhance the student's major area of study.

## Interdisciplinary Minors

The interdisciplinary minors in this section may be presented in partial fulfillment of the Major Field Requirements for the Bachelor of Arts degree (see page 50).

## Restrictions for Interdisciplinary Minors

No more than two courses for these minors may overlap with other requirements whether within general education or within courses in any majors or other minors. This restriction does not apply to majors or minors in the College of Engineering and the College of Business.

## Interdisciplinary Majors

The interdisciplinary majors offered in the College of Arts and Sciences lead to the Bachelor of Arts or Bachelor of Science degree. These include Actuarial Science (page 69), American Studies (page 71), Chinese and Japanese Studies (page 182), Data Science (page 108), Environmental Science (page 140), International Economics and Cultural Affairs (page 186), Global Service (page 187), and Theology and Ministry (page 285).

## Restrictions for Interdisciplinary Majors

A student may combine an additional major or minor with an interdisciplinary major. If there are overlapping courses, the following restrictions apply. An additional major requires at least four courses of at least three credits each beyond those courses in the interdisciplinary major. An additional minor requires at least two courses of at least three credits each beyond those courses in the interdisciplinary major.

An administrative committee for an interdisciplinary major or minor may set further restrictions for their major or minor if desired.

## Business Programs

The following interdisciplinary programs are administered by the College of Business.

## Aviation Minor

The minor consists of 22 credits and leads to two FAA certifications and one rating. Note that in order to complete this minor, the student must pass all two FAA certifications and one FAA rating.

The Aviation minor may also be completed by students in other colleges but will not count toward fulfilling minor requirements within that student's college. However, the minor will appear on the transcript of all students.

The flight courses for this program are offered on site at the Porter County Regional Airport through a partnership with Eagle Aircraft, a SEVIS-approved flight school.

| Required Courses |  | $\mathbf{2 2 ~ C r}$. |
| :--- | :--- | ---: |
| MET 103 | Introduction to Meteorology | 4 Cr. |
| AVN 101 | Air Transportation | 1 Cr. |
| AVN 121 | Private Pilot Airplane Ground | 3 Cr. |
| AVN 122 | Private Pilot Airplane Flight | 2 Cr. |
| AVN 221 | Instrument Airplane Ground | 3 Cr. |
| AVN 222 | Instrument Airplane Flight | 2 Cr. |
| AVN 321 | Commercial Airplane Ground | 3 Cr. |
| AVN 322 | Commercial Airplane Flight I | 2 Cr. |
| AVN 323 | Commercial Airplane Flight II | 2 Cr. |

## Business Administration

## Objective

This minor is intended for students who plan to complete a Master in Business Administration degree in the future or who desire a more advanced preparation in a business minor than is provided by the Fundamentals of Business Minor. This is a comprehensive business minor covering all the major areas of course work to prepare one for entering a master's program. Students intending to transfer into the College of Business need another math course in addition to these courses and the math course taken as a prerequisite for IDS 205. The College of Business requires each student to maintain a minimum minor cumulative grade point average of 2.25.

## Business Administration Minor (Minimum 27 Cr.)

| ACC 205 | Financial Accounting | 3 Cr. |
| :--- | :--- | :--- |
| ACC 206 | Managerial Accounting | 3 Cr . |
| BLAW 104 | Legal Environment of Business | 3 Cr . |
| ECON 221 | Principles of Microeconomics | 3 Cr |
| ECON 222 | Principles of Macroeconomics | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr |
| FIN 304 | Financial Management | 3 Cr. |
| MGT 304 | Management and Organizational Behavior | 3 Cr. |
| MKT 304 | Marketing Management |  |
| Note: MATH | 124 is a prerequisite for IDS 205. STAT/IDS $\mathbf{3 4 0}$ may be substituted |  |
| for IDS 205. |  |  |

## Business Analytics

## Objective

The Business Analytics minor is intended for students who want to enhance their skills through the effective use of data. These data savvy professionals will not possess the deep analytical skills obtained from a more quantitatively intensive program, but address a wider scale of industry needs by offering a broader range of content, ensuring that, at a minimum, students understand data management and quantitative analysis and are able to effectively communicate this information in a business context. The College of Business requires each student to maintain a minimum minor cumulative grade point average of 2.25.

## Business Analytics Minor (Minimum 19 Cr.)

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| BUS 330 | Database Management Systems | 3 Cr . |
| BUS 440 | Data Mining | 3 Cr . |
| IDS 115 | Business Applications for Decision Making | 3 Cr . |
| IDS 340 | Statistics for Decision Making | 3 Cr . |
| GEO 215 | Introduction to Geographical Information Systems | 4 Cr . |

## Fundamentals of Business

## Objective

The objective of the Fundamentals of Business Minor is to introduce nonbusiness majors in Arts and Sciences, Engineering, and Nursing and Health Professions to the fundamentals of business. The College of Business requires each student to maintain a minimum minor cumulative grade point average of 2.25.

## Fundamentals of Business Minor (Minimum 18 Cr .)

| ECON 221 | Principles of Microeconomics | 3 Cr. |
| :--- | :--- | :--- |
| ACC 205 | Financial Accounting | 3 Cr. |
| BLAW 104 | Legal Environment of Business | 3 Cr. |
| FIN 304 | Financial Management | 3 Cr. |
| MGT 304 | Management and Organizational Behavior | 3 Cr. |
| MKT 304 | Marketing Management | 3 Cr. |
| Note: IDS 205 is a prerequisite for FIN 304, and MATH |  |  |
| 124 is a prerequisite for IDS 205. |  |  |

Students who are considering the possibility of becoming Business Majors must take the prerequisite courses in mathematics, statistics, etc., in order to qualify for admission to the College of Business.

Students earning a Bachelor's degree in the College of Arts and Sciences may apply the 18 credits earned in the courses offered by the College of Business toward the 124 required for graduation (see page 58).

## General Programs

## Applied Statistics

## Administration

This minor is administered by the Department of Mathematics and Statistics in consultation with the appropriate departments within the College of Arts and Sciences and the professional colleges.

## Objectives

The applied statistics minor utilizes an interdisciplinary perspective to develop the student's ability to perform statistical analysis. The impact of statistics profoundly affects society today. Statistical tables, survey results, and the language of probability are used with increasing frequency by the media. Statistics also has a strong influence on physical sciences, social sciences, engineering, business, and industry. The improvements in computer technology make it easier than ever to use statistical methods and to manipulate massive amounts of data. This minor will prepare students to analyze data in their professional work. In addition, it will also provide background for those students who intend to pursue work in applied disciplines.

## Applied Statistics Minor (Minimum 15 Cr.)

A minimum of 15 credit hours is required to complete this minor. Students who intend to complete this minor are strongly encouraged to consult their academic advisor before they begin their junior year. Depending on their major, students are advised to include specific courses as electives in their plans of study. Students should consult their academic advisors to determine which requirements these other courses fulfill.

| One course from the following options: |  |  |
| :---: | :---: | :---: |
| STAT 140 | General Statistics | 3 Cr . |
| STAT 240 | Statistical Analysis | 3 Cr . |
| PSY 201 | Statistical Methods | 3 Cr . |
| IDS 205 | Business Statistics | 3 Cr . |
| CE 202 | Statistical Applications in Civil Engineering | 3 Cr . |
| One course from the following: |  |  |
| IDS/STAT 340 | Statistics for Decision Making | 3 Cr . |
| ECON 325 | Econometrics | 3 Cr . |
| Three courses from the following: |  |  |
| BIO/MATH 321 | Mathematical Models of Infectious Diseases | 3 Cr . |
| BUS 440 | Data Mining | 3 Cr . |
| CS 325 | Simulation and Modeling | 3 Cr . |
| DATA 433 | Data Mining and Application | 3 Cr . |
| ECON 493 | Seminar in Applied Statistics | 3 Cr . |
| GEO/MET 460 | Data Analysis | 3 Cr . |
| POLS 210 | Research Methods in Political Science | 3 Cr . |
| PSY 202 | Research Methods in Psychology | 3 Cr . |
| SOC 320 | Research Methods in Sociology | 3 Cr . |
| STAT 343 | Time Series Analysis | 3 Cr . |
| STAT 344 | Stochastic Processes | 3 Cr . |
| STAT 363 | Introduction to SAS | 3 Cr . |
| STAT 441 | Probability | 4 Cr . |
| STAT 442 | Mathematical Statistics | 3 Cr . |
| STAT 490 | Advanced Topics in Statistics | 3 Cr . |

Note that due to restrictions on overlapping of courses in different programs, Actuarial Science majors may not use STAT 343, STAT 344, STAT 441, or STAT 442 to fulfill minor requirements. Students selecting the full Statistics major are not eligible to earn the Applied Statistics minor.

## Cinema and Media Studies

## Administrative Committee: Professor Lutze (Communication); Associate Professors Tomasik (Foreign Languages and Literatures), Wuerffel (Art), Yogan (Sociology); Assistant Professor Xia (History).

## Objectives

The minor in Cinema and Media Studies offers the opportunity to study the role of films and other media as artistic expressions and cultural forces. Students will learn critical and theoretical tools for analyzing motion pictures and their historically evolving role in reflecting and shaping social ideologies and norms. The minor in Cinema and Media Studies allows the small-scale but concentrated study of one important art form, and through it, our contemporary world.

Cinema and Media Studies Minor (Minimum 15 Cr.)

| COMM 270/ ENGL 370 | Introduction to Cinema | 3 Cr . |
| :---: | :---: | :---: |
| At least one course from | e following areas: | 6 Cr . |
| Production: |  |  |
| COMM 271 | Cinema Production | 3 Cr . |
| ART 324 | Digital Video Art | 1+4, 3 Cr . |
| Culture/History: |  |  |
| COMM 291 | World Cinema | 3 Cr . |
| FLF 260 | French Film Studies | 3 Cr . |
| FLGR 260 | German Film Studies | 3 Cr . |
| GEO 274 | North American Indian on Film | 3 Cr . |
| HIST 393 | History through Film | 3 Cr . |
| Note: Electives may be chosen from any of the above courses that have not already been taken, any other courses approved by the Cinema and Digital Media Studies administrative committee, and any of the following courses when they are taught on film topics. |  |  |
|  |  |  |
| CC 300 | Seminar | 3 Cr . |
| COMM 290 | Topics in Communication | 3 Cr . |
| COMM 371 | Advanced Cinema Production | 3 Cr . |
| COMM 390 | Topics in Communication | 3 Cr . |
| COMM 472 | Screenwriting | 3 Cr . |
| COMM 490 | Topics in Communication | 3 Cr . |
| ENGL 490 | Topics in Literature | 3 Cr . |
| FLF 290 | Topics in French | 3 Cr . |
| FLF 390 | Topics in French | 3 Cr . |
| FLF 493 | Senior French Seminar | 3 Cr . |
| FLGR 390 | Seminar in German | 3 Cr . |
| FLGR 493 | Senior German Seminar | 3 Cr . |
| FLS 390 | Seminar in Spanish | 3 Cr . |
| FLS 493 | Senior Spanish Seminar | 3 Cr . |
| SOC 280 | Media and Crime | 3 Cr . |
| SOC 281 | Hollywood Goes to High School | 3 Cr . |
| SOC 315 | Mass Media and Society | 3 Cr . |
| THTR 252 | Writing for Stage and Screen | 3 Cr . |
| THTR 390 | Topics and Projects | 3 Cr . |

## Environmental Studies

Administrative Committee: Professors Eberhardt (Biology), Longan (Geography and Meteorology, chair); Associate Professors Aljobeh (Civil Engineering), Devaraj (Economics), Ganesh Babu (Geography and Meteorology), Peller (Chemistry), Schoer (Chemistry).

## Objective

This minor will broaden the experiences of students with traditional majors in the College of Arts and Sciences by exposing them to approaches used by various disciplines and sectors of society that are attempting to solve complex environmental problems.

## Environmental Studies Minor (Minimum 16 Cr.)

| Environmental Studies |  | 3 Cr . |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| BIO 250 | Human Environmental Biology | 3 Cr . |
| GEO 260 | Environmental Conservation | 3 Cr . |
| Environment and Socie | Elective | 3 Cr . |
| One course from the following options: |  |  |
| GEO 321 | Urban and Regional Planning | 3 Cr . |
| ECON 210 | Environmental Economics and Policy | 3 Cr . |
| PSY 355 | Environmental Psychology | 3 Cr . |
| Any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| Environmental Meaning | and Values Elective | 3 Cr . |
| One course from the following options: |  |  |
| GEO 475 | Culture, Nature, Landscape | 3 Cr . |
| PHIL 230 | Environmental Philosophy and Ethics | 3 Cr . |
| Any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| Environmental Studies | ctives | 6-7 Cr. |
| Two courses from the following options: |  |  |
| BIO 172 | Diversity of Life | 3+3, 4 Cr . |
| BIO 350 | Field Biology: Spring | 2+4, 3 Cr . |
| BIO 440 | Ecology | 3+4, 4 Cr . |
| ECON 210 | Environmental Economics and Policy | 3 Cr . |
| ENVS 290 | Topics in Environmental Science | 1-3 Cr. |
| ENVS 490 | Advanced Topics in Environmental Science | 1-3 Cr. |
| GEO 365 | Biogeography | 3 Cr . |
| GEO 385 | Field Study (when environmental field study) | 0+4, 1-3 Cr. |
| GEO/MET 240 | Introduction to Climate Change | 3 Cr . |
| MET 440 | Global Climate Change | 3 Cr . |
| PHIL 230 | Environmental Philosophy and Ethics | 3 Cr . |
| Any new or topic course approved by the chair of the Environmental Science Administrative Committee |  |  |
| Capstone Experience |  | 1-3 Cr. |
| One course from the following options: |  |  |
| ENVS 381 | Cooperative Education in Environmental Science | 1-2 Cr. |
| ENVS 386 | Internship in Environmental Science | 1-3 Cr. |
| ENVS 495 | Independent Research in Environmental Science | 1 Cr . |
| ENVS 499 | Colloquium on Environmental Science and Management | 1 Cr . |

Note: No more than two courses for this minor may overlap with other requirements whether within general education or within requirements for any majors or other minors. Other appropriate topics courses may be substituted for requirements with the approval of the chair.

## Ethnic Studies

## Administrative Committee: Professor Janke (Geography and Meteorology, chair).

## Objectives

The Ethnic Studies Minor offers an interdisciplinary perspective on race, ethnicity, and culture, especially on the nature of historical and social constructs that define group and individual experiences, attitudes, and identities. The focus of the minor will be on the following North American ethnic groups: African-American, Chicano/Latino, Native American, and Asian-American. The objectives of the minor have two complementary components. One, more narrowly academic, aims at helping students develop critical thinking using a multicultural perspective with reference to their own backgrounds and those of others, and with materials from within and without the traditional canon. The other, more social and experiential, involves becoming familiar with and appreciating diversity among students and the larger community. Both aim at providing knowledge and understanding which will help students reach across racial and cultural barriers and equip them to function effectively, both professionally and personally, in a multicultural and multiracial world.

## Ethnic Studies Minor (Minimum 15 Cr.)

| Program Core |  |  |
| :---: | :---: | :---: |
| One course from the following options: |  |  |
| HIST 225 | Alternative Perspectives of United States History | 3 Cr . |
| ENGL 365 | Studies in American Literature | 3 Cr . |
| Elective Courses |  |  |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| ENGL 365 | Studies in American Literature | 3 Cr . |
| GEO 200 | American Ethnic Geography | 3 Cr . |
| GEO 274 | North American Indian on Film | 3 Cr . |
| HIST 323 | Civil War and Reconstruction | 3 Cr . |
| MUS 101 | Introduction to Music | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights \& Justice | 3 Cr . |
| THEO 333 | Black Theology and Black Church | 3 Cr . |
| THEO 349 | Topics in Religious Ethics | 3 Cr . |
| THEO 364 | Native American Religions | 3 Cr . |

Additional courses for the minor will consist of topics courses and departmental seminars, each of which must be approved and will be publicized by the administrative committee. Students wishing to use a course not listed must have the course approved by the administrative committee prior to enrolling in the course. No more than one course at the 100 level may apply towards the minor. At least two of the courses applying towards the minor must be at the 300 level or above.

## Forensic Science

Administration: This minor is administered by the Biology and Chemistry departments in consultation with the Sociology and Psychology departments, and other interested parties.

## Objective

The forensic science minor is intended for students majoring in Biology or Chemistry who are interested in the field of forensic science. Students will learn laboratory techniques applicable to forensic science and be exposed to a variety of disciplines within the field.

## Forensic Science Minor (Minimum 17 Cr.)

| Required Courses |  |  |
| :---: | :---: | :---: |
| BIO 445 | Forensic Biology | 3+3, 4 Cr. |
| BIO 493 | Seminar in Biology: Forensic Science | 1 Cr . |
| CHEM 340 | Forensic Chemistry | 2+3, 3 Cr. |
| PSY 465 | Psychology and Law | 3 Cr . |
| SOC 130 | The Criminal Justice System | 3 Cr . |
| One course from the following options: |  |  |
| BIO 450 | Molecular Biology | 3+3, 4 Cr . |
| CHEM 315 | Biochemistry I | 3 Cr . |
| Total |  | 17-18 Cr. |

Prerequisites for courses in the minor, in addition to courses in the major - Biology majors: CHEM 230, and PSY 110
Prerequisites for courses in the minor, in addition to courses in the major - Chemistry majors: BIO 171, BIO 172, and PSY 110
Notes:

1. Students completing this minor with a major in Biology are encouraged to take BIO 340: Human Molecular Genetics, and BIO 360: Modern Microscopy.
2. Students completing this minor with a major in Chemistry are encouraged to take CHEM 316: Biochemistry II, and CHEM 430: Advanced Instrumental Analysis.
3. Students cannot have more than two courses that overlap between the Forensic Science minor and their major, any minors, or general education.

## Gender Studies

Administrative Committee: Professors Dooley (Law), J. Moore (Theology); Associate Professors Burow-Flak (English), N. Corazzo (Art), Seguin (History); Lecturer Leeb (Theology, chair).

## Objectives

The Gender Studies Minor offers an interdisciplinary perspective on the lives of women and men, especially on the nature of social and cultural constructs that give meaning to the biological difference of sex. The fact that persons are male and female takes on a complex of meaning that can be explored through study of literature and the arts, religion, history, society and social institutions, the professions, human psychology and development, and life sciences. This program, by including courses that study women in culture, society, and history, and that include the best of a growing body of feminist theory and research, also intends to help correct a tradition of scholarship and teaching that has ignored the contributions and concerns of women. Overall, the program will give both men and women a better sense of identity and possibility, and will foster greater understanding of the complex ways in which we, for good and for ill, are influenced by culture and society.

## Gender Studies Minor (Minimum 15 Cr.)

| Core Requirement |  | 3 Cr . |
| :---: | :---: | :---: |
| GNST 201 | Introduction to Gender Studies | 3 Cr . |
| Social and Life Sciences |  |  |
| One course from the following options: |  |  |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| PSY 390 | Special Topics in Psychology (when appropriate topic) | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| SOCW 220 | Human Behavior and Social Environment | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights \& Justice | 3 Cr . |
| SOCW 390 | Social Work Colloquium (when appropriate topic) | 3 Cr . |
| SOC 220 | The Family | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOC 340 | Gender | 3 Cr . |
| Humanities and Fine Arts |  |  |
| One course from the following options: |  |  |
| ART 311 | Topics in the Theory and History of Art (when appropriate topic) | 3 Cr . |
| ART 318 | Nineteenth Century European Art | 3 Cr . |
| COMM 322 | Sports Media Formats | 3 Cr . |
| ENGL 200 | Literary Studies | 3 Cr . |
| ENGL 490 | Topics in Literature (when appropriate topic) | 3 Cr . |
| THEO 317 | The World of the New Testament | 3 Cr . |
| THEO 319 | Topics in Biblical Studies | 3 Cr . |
| THEO 343 | Theology of Marriage and Sexuality | 3 Cr . |
| CC 300 | Seminar | 3 Cr . |

## Electives

The remainder of the program (normally two courses) are elective. All courses should be chosen from a list of courses approved each year by the committee.

## Gender Studies Courses

GNST 201 Introduction to Gender Studies
An introductory course exploring the issues in gender construction within our society together with the ways that gender issues have affected the various disciplines within the University. This course is intended to introduce the student to the gender studies minor as a foundation for studying the issues related to gender in the other courses included in the minor.

Intensive study of a special topic in gender studies. Topics may focus on theory and method; on the intersection of gender studies with other disciplines; or on particular groups, such as women of color. May be repeated for credit if the topic varies. Prerequisite may vary with topic.

Many additional courses for the minor will be offered as topics courses and departmental seminars, each of which must be approved and will be publicized by the administrative committee each year. Students wishing to use a course not listed above must have the course approved by the administrative committee prior to enrolling in the course.

## Human Aging

## Administrative Committee: Professor Nelson (Psychology); Associate Professor Ringenberg (Social Work).

## Objectives

The Human Aging minor offers an interdisciplinary perspective on the nature of the aging process and the needs of older adults. Aging involves a complex set of changes that involve biological, psychological, and spiritual dimensions, as well as the role of the older individual in society. It is the premise of the program that these changes are best understood and explored in an interdisciplinary context. As the average human life-span increases and the proportion of elderly people in our country increases, study in human aging will become very important to those seeking to understand and render service to our society. Individuals interested in careers in the social or biomedical sciences or theology will find this minor to be an essential part of their preparation.

## Human Aging Minor (Minimum 18 Cr.)

| Aging, Behavior, and Society |  | 3 Cr . |
| :---: | :---: | :---: |
| Three credits from the following options: |  |  |
| PSY 332 | Psychology of Adulthood and Aging | 3 Cr . |
| PSY 375 | Human Neuropsychology | 3 Cr . |
| Aging and Religious |  | 3 Cr . |
| Three credits from the following options: |  |  |
| THEO 343 | Theology of Marriage and Sexuality (when appropriate) | 3 Cr . |
| THEO 349 | Topics in Religious Ethics (when appropriate) | 3 Cr . |
| THEO 353 | Studies in Theology and Practice | 3 Cr . |
| Aging and Health |  | 3 Cr . |
| Three credits from the following options: |  |  |
| NUR 418 | Global Health Issues | 3 Cr . |
| NUR 351 | Gerontological Nursing | 2.5+0.5, 3 Cr . |
| NUR 390 | Topics in Nursing and Health Care | 1-3 Cr. |
| Elective Courses |  | 9 Cr . |
| Nine credits from the following options: |  |  |
| BIO 260 | Human Nutrition | 3 Cr . |
| SOCW 390 | Social Work Colloquium (when appropriate) | 2-3 Cr. |
| SOC 220 | The Family | 3 Cr . |
| SOC 390 | Issues in Sociology (when appropriate) | 3 Cr . |
| THEO 341 | Bioethics | 3 Cr . |

## Neuroscience Minor

Administrative Committee: Professors Carlson (Psychology), Nelson (Psychology, chair); Associate Professors Anderson (English), Glass (Computing and Information Sciences), Preston (Philosophy), Scaglione-Sewell (Biology); Assistant Professors Butler (Psychology), Iceman (Biology), R. Johnson (Engineering), Woodward (Philosophy).

## Objectives

An understanding of the mind is one of the most important and fascinating human quests. For those who want to join this important endeavor, the Neuroscience minor offers an interdisciplinary perspective on the structure and function of the human nervous system and the mental abilities that depend upon its operation.

Neuroscience is a central topic of contemporary scientific inquiry, with many large research initiatives underway in the US and international settings. It is an exciting field that attempts to study (1) the basic structure and characteristics of human mental processes, (2) the anatomy and physiology of the nervous system, and (3) how mental and physical processes relate to each other.

The field of neuroscience is both fascinating and complex, as it draws on insights from many different fields including bioengineering, cognitive science, computer science, experimental and clinical psychology, linguistics and philosophy.

Students entering many research and professional careers will find a background in neuroscience to the helpful or even essential in a number of fields such as artificial intelligence, clinical neuropsychology, medicine (especially neurology and psychiatry), neurolinguistics, and philosophy (especially philosophy of mind). Integral to the program is a set of learning objectives that orient faculty and students toward the acquisition of critical knowledge and skills necessary for understanding, appreciating and using the tools of modern neuroscience.

## Neuroscience Minor (Minimum 16 Cr.)

| Core Courses |  | 10 Cr |
| :---: | :---: | :---: |
| BIO 370 | Neurobiology | 3 Cr . |
| PSY 375 | Human Neuropsychology | 3 Cr . |
| Take four credits of the following course: |  | 4 Cr . |
| NSCI 393 | Neuroscience Seminar | 0-1 Cr. |
| Elective Courses |  | 6 Cr . |
| Choose 6 credits from two different departments from the following options: |  |  |
| BIO 380 | Principles of Human Physiology | 3 Cr . |
| BIO 493 | Seminar in Biology (with committee approval) | 1 Cr . |
| ENGL 343 | Introduction to Linguistics | 3 Cr . |
| PHIL 315 | Philosophy of Mind and Language | 3 Cr . |
| PSY 245 | Physiological Psychology | 3 Cr . |
| PSY 345 | Sensation and Perception | 3 Cr . |
| PSY 346 | Laboratory in Sensation and Perception | 1 Cr . |
| PSY 350 | Cognitive Psychology | 3 Cr . |
| PSY 351 | Laboratory in Human Cognition | 1 Cr . |
| PSY 376 | Laboratory in Neuropsychology | 1 Cr . |
| Capstone Course |  | 0-1 Cr. |
| NSCI 499 | Neuroscience Capstone Project | 0-1 Cr. |

Core classes should be completed during the sophomore or junior year if possible, while Electives may be taken at any time. The Capstone experience will normally be taken in the senior year. Prerequisite courses are required prior to registration in Core classes and are typically completed during the freshman or sophomore year of study. In addition, the core program courses require a significant background in the biological and psychological sciences to allow full engagement with the technical aspects of neuroscience. Students are encouraged to consult with a neuroscience advisor to assist in selecting courses that will support their professional goals.

## Neuroscience Courses

A discussion of basic research, issues and methods in the study of the human nervous system and mental abilities. May be repeated for credit up to a maximum of 4 credits. Prerequisite: BIO 151 or BIO 171, plus one of the following: CHEM 115, CHEM 121 or PSY 110. S/U grade only.

Neuroscience Capstone Project
A research project or study of an advanced topic related to neuroscience, typically done during the senior year of study. Typically taken for 0 credits. Approval of the administrative committee is required prior to registration. A public presentation of the project is required. Prerequisite: BIO 370 and PSY 375.

## Peace and Social Justice Studies

## Administrative Committee: Professor Winquist (Psychology); Associate Professors Geiman (Philosophy), Ringenberg (Social Work), Yogan (Sociology and Criminology); Instructor Western (Christ College, chair).

## Objectives

Valparaiso University nurtures a community whose members learn to embody social responsibility. The community challenges its members to discover ways of using their abilities in the service of the whole human family. The Peace and Social Justice Studies Minor is an interdisciplinary program focusing on social responsibility by examining the means of establishing justice, achieving peace, and resolving conflicts nonviolently. Peace rooted in justice requires the nurturing of a culture of peace in homes, schools, communities, religious institutions, nations, and across the world. Peace rooted in justice requires teaching peace and social justice to cultivate those who will become socially responsible leaders.

## Peace and Social Justice Studies Minor (Minimum 15 Cr.)

| Program Core |  |  |
| :---: | :---: | :---: |
| PSJ 201 | Principles of Peace and Social Justice | 3 Cr . |
| PSJ 386 | Internship in Peace and Social Justice Studies | 3 Cr . |
| International/Global T | Track | 9 Cr . |
| Concentrates on social responsibility between nations and other large groups |  |  |
| Nine credits from the following options (no more than two courses from specified General Electives \& no more than two courses from a single department): |  |  |
| HIST 329 | Revolution! Insurgence in Latin America | 3 Cr . |
| HIST 350 | Colonialism and Independence: Understanding Modern Africa | 3 Cr . |
| HIST 355 | Modern Middle Eastern History | 3 Cr . |
| POLS 150 | International Relations | 3 Cr . |
| THEO 334 | Holocaust Theology | 3 Cr . |
| THEO 345 | The Church in the World | 3 Cr . |
| THEO 362 | Islamic Religion and Culture | 3 Cr . |
| Individual/Local Track |  | 9 Cr . |
| Concentrates on social responsibility among individuals, small groups, and communities |  |  |
| Nine credits from the following options (no more than two courses from specified General Electives \& no more than two courses from a single department): |  |  |
| ECON 136 | The Economics of Health, Education, and Welfare | 3 Cr . |
| ECON 233 | The Economics of Race and Gender | 3 Cr . |
| HIST 225 | Alternative Perspectives of United States History | 3 Cr . |
| POLS 371 | Constitutional Law I | 3 Cr . |
| POLS 271 | The Judicial Process | 3 Cr . |
| SOC 130 | The Criminal Justice System | 3 Cr . |
| SOC 210 | Contemporary Social Problems | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOC 360 | Penology | 3 Cr . |
| SOC 390 | Issues in Sociology | 3 Cr . |
| SOCW 260 | Diverse Populations: Human Rights \& Justice | 3 Cr . |
| THEO 329 | Topics in Christian History (when topic is appropriate) | 3 Cr . |
| THEO 333 | Black Theology and Black Church | 3 Cr . |
| THEO 349 | Topics in Religious Ethics (when topic is appropriate) | 3 Cr . |
| THEO 353 | Studies in Theology and Practice | 3 Cr . |
| General Electives |  |  |
| No more than one course at the 100 -level and no more than two courses from a single department |  |  |
| PHIL 250 | Political Philosophy | 3 Cr . |
| POLS 241 | Political Philosophy | 3 Cr . |
| POLS 361 | Public Policy | 3 Cr . |
| POLS 490 | Advanced Topics in Political Science II | 3 Cr . |


| PSY 225 | Social Psychology | 3 Cr. |
| :--- | :--- | :--- |
| PSY 390 | Special Topics in Psychology | 3 Cr |
| THEO 318 | Jesus and the Gospels | 3 Cr. |

Several other courses, offered as topics courses and seminars, will be publicized when approved by the administrative committee. A student who wishes to include a course not on the list of electives must obtain the approval of the administrative committee before enrolling in that course.

## Peace and Social Justice Courses

(Also offered as POLS 353/553.) This course focuses on social responsibility by examining the means of establishing justice, achieving peace, and resolving conflicts nonviolently. The causes, nature, and processes of conflict are reviewed. That conflicts are frequently rooted in injustice requires an understanding of the nature of social justice. These injustices may arise from economic, political, sociological, religious, and/or psychological sources. The nature and methods of nonviolent conflict resolution and reconciliation are also considered. This course is intended to introduce students to the peace and social justice minor as a foundation for studying these issues as they are treated in the other courses included in this program. At the end of this course, students will decide whether they wish to pursue either the International/Global Track or the Individual/ Local Track of the program.

## Philanthropic Leadership and Service

## Administrative Committee: Professor Buinicki (English); Associate Professor Hora (Political Science); Clinical Assistant Professor Sheets (Nursing).

## Objectives

There are currently over one million registered non-profit organizations in the United States. While each organization may attract individuals with particular interests and expertise, these agencies also need leaders with consistent abilities in oral and written communication, critical thinking, problem solving, organization, and public advocacy within the corporate and governmental spheres. The minor in Philanthropic Leadership and Service further develops these core competencies while introducing students to the range of issues facing our communities. Students working in the minor will demonstrate that they have gone beyond volunteering at local organizations to thinking about how they can best continue contributing to these organizations in a long-term and professional capacity. Finally, the minor gives students seeking degrees in other fields an opportunity to develop and to pursue their passion for service in a thoughtful and rigorous fashion.

| Required Courses |  | 6 Cr . |
| :---: | :---: | :---: |
| GS 220 | Contemporary Issues in Philanthropy and Service | 3 Cr . |
| ENGL 296 | Traditions of Giving and Serving in American Life | 3 Cr . |
| Elective Courses |  | 12 Cr . |
| Twelve credits from the following options: |  |  |
| COMM 265 | Public Relations Principles | 3 Cr . |
| COMM 345 | Leadership Communication | 3 Cr . |
| COMM 362 | Communication Cases and Campaigns | 3 Cr . |
| СОММ 363 | Public Relations: Agency Perspective | 3 Cr . |
| COMM 401 | Social Media | 3 Cr . |
| ENGL 210* | Introduction to Business and Professional Writing | 3 Cr . |
| FLS 308* | Spanish for Service Professionals | 3 Cr . |
| HCL 151 | Communication Process in Health Care Leadership | 3 Cr . |
| HCL 301 | Health Care Strategic Planning | 3 Cr . |
| HCL 302 | Health Care Ethics and Legal Issues | 3 Cr . |
| HCL 418 | Global Health Issues | 3 Cr . |

Interdisciplinary Programs

| LS 420 | Senior Seminar in the Social Sciences | 3 Cr . |
| :---: | :---: | :---: |
| MGT 304* | Management and Organizational Behavior | 3 Cr . |
| MGT 315* | Leadership and Interpersonal Skills | 3 Cr . |
| NUR 212 | Introduction to Community-Based Nursing and Health Promotion | 3 Cr . |
| PHIL 125 | The Good Life | 3 Cr . |
| POLS 261 | State and Local Politics | 3 Cr . |
| POLS 360 | Public Administration | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |
| THEO 332 | Christian Theology and the Moral Life | 3 Cr . |

Note: No more than two courses (six credits) may be taken from any one department.

* Denotes course requires a prerequisite

Within this set of courses, students may choose to develop a focus area that addresses their specific interest in the non-profit sector, although such focus areas are not required to complete the minor. Some sample focus areas and possible courses are listed below, but keep in mind that no more than two courses may be taken from any one department:

| Communications |  |  |
| :--- | :--- | :--- |
| For students interested in marketing and public relations |  |  |
| COMM 265 | Public Relations Principles | 3 Cr. |
| COMM 345 | Leadership Communication | 3 Cr. |
| COMM 362 | Communication Cases and Campaigns | 3 Cr |
| COMM 363 | Public Relations: Agency Perspective | 3 Cr. |
| COMM 401 | Social Media | 3 Cr. |
| ENGL 210 | Introduction to Business and Professional Writing | 3 Cr |
| LS 420 | Senior Seminar in the Social Sciences | 3 Cr. |


| Health and Social Work |  |  |
| :---: | :---: | :---: |
| For students interested in service and philanthropy related to the health or social work professions |  |  |
| FLS 308 | Spanish for Service Professionals | 3 Cr . |
| NUR 212 | Introduction to Community-Based Nursing and Health Promotion | 2.5+0.5, 3 Cr . |
| HCL 151 | Communication Process in Health Care Leadership | 3 Cr . |
| HCL 301 | Health Care Strategic Planning | 3 Cr . |
| HCL 302 | Health Care Ethics and Legal Issues | 3 Cr . |
| HCL 418 | Global Health Issues | 3 Cr . |
| POLS 361 | Public Policy | 3 Cr . |
| LS 420 | Senior Seminar in the Social Sciences | 3 Cr . |
| SOC 275 | Systems of Social Stratification | 3 Cr . |
| SOCW 210 | Social Welfare: Policy and Services | 3 Cr . |


| Humanities |  |  |
| :--- | :--- | :--- |
| For students interested in graduate work in philanthropic studies | 3 Cr. |  |
| ENGL 210 | Introduction to Business and Professional Writing | 3 Cr. |
| LS 420 | Senior Seminar in the Social Sciences | 3 Cr. |
| PHIL 125 | The Good Life | 3 Cr. |
| THEO 332 | Christian Theology and the Moral Life |  |


| Non-Profit Management |  |  |
| :--- | :--- | :--- |
| For students interested in pursuing service in an executive capacity |  |  |
| COMM $\mathbf{3 6 3}$ | Public Relations: Agency Perspective | 3 Cr . |
| ENGL $\mathbf{2 1 0}$ | Introduction to Business and Professional Writing | 3 Cr. |
| LS 420 | Senior Seminar in the Social Sciences | 3 Cr. |
| MGT 304 | Management and Organizational Behavior | 3 Cr. |
| MGT 315 | Leadership and Interpersonal Skills | 3 Cr. |
| POLS 360 | Public Administration | 3 Cr. |

## Urban Studies

Administrative Committee: Professors Baas Janke (Geography and Meteorology), Longan (Geography and Meteorology, chair); Associate Professor Yogan (Sociology and Criminology); Assistant Professor Carter (History).

## Objectives

The Urban Studies Minor provides students with an interdisciplinary consideration of the diverse social, cultural, economic, political, and spatial issues confronting contemporary American cities. The majority of the minor is comprised of an experiential semester in one of America's largest and most diverse metropolitan areas- Chicago. This program involves living, learning, and working in the city and offers opportunities for students in a wide range of programs, from art to economics to premed. The goal of the minor is to enhance students' career opportunities, particularly through the internship, while equipping them to contribute meaningfully to public life and discourse.

## Urban Studies Minor (Minimum 19 Cr.)

| Chicago Urban Semester (Urban Studies Focus) |  |  |
| :---: | :---: | :---: |
| GS 338 | Core Course: Chicago: A City of Many Dimensions | 4 Cr . |
| GS 348 | The Seminar | 4 Cr . |
| GS 386 | The Internship | 4 Cr . |
| GS 395 | Independent Study Project | 4 Cr . |
| Elective Courses |  |  |
| One course from the following options: |  |  |
| GEO 320 | Urban Geography | 3 Cr . |
| GEO 321 | Urban and Regional Planning | 3 Cr . |
| HIST 327 | History of Chicago | 3 Cr . |
| POLS 261 | State and Local Politics in the United States | 3 Cr . |
| POLS 320 | Politics of Urban and Metropolitan Areas | 3 Cr . |
| SOC 325 | Urban Sociology | 3 Cr . |

A student may substitute an appropriate topics course or departmental seminar in place of one of the elective courses listed above, provided the topic has an urban focus and is approved by the chair of the administrative committee prior to the student's enrolling in the course.

## Urban Semester

The following courses are offered in a residential program in Chicago in cooperation with the Associated Colleges of the Midwest:

Core Course: Chicago: A City of Many Dimensions
4 Cr .
Exploration into Chicago's history, its unique identity, its illustrative diversity grounded in its neighborhoods, its unscrupulous characters, its struggles for power, and the inventiveness of its people and institutions. By questioning their assumptions about Chicago, students will discover themselves as transformed agents of change in the arts, as innovators, and in reshaping their communities. This course takes an interdisciplinary approach in viewing Chicago and allows students to examine the city from multiple perspectives. $\mathrm{S} / \mathrm{U}$ grade only.

The Seminar
4 Cr.
Each student chooses one urban issue to examine in depth in a seminar involving readings, class discussions, and field visits. Topics represent a range of academic disciplines, usually making it possible to select a seminar relating to a major. Recent seminar titles included City Politics, Urban Planning, Arts in the Black Community, Sexism and Racism, The Helping Professions, Dynamics of Urban Housing. Graded A-F.

The Internship
Each student devotes 15 hours per week to an agency which can provide direct involvement in city life and exposure to a particular career environment. The placement is determined jointly by the student and staff during the first week of the semester. A wide range of placements is available. Graded either A-F or S/U at the student's choice upon entry into the program.

Each student pursues one topic from the Chicago experience under the supervision of a faculty member. Some projects grow out of the Internship whereas others are based on another component of the program. The student may elect to write a research paper or a creative piece, or to use photographic or other visual media. Graded A-F.

All sophomores, juniors and seniors at the University are eligible to participate in this program. Students shall be admitted to this program on the recommendation of the Urban Studies Advisory Committee.

Valparaiso University students register at Valparaiso for the Chicago Urban Semester and pay to Valparaiso University the general fee charged of all full-time students. A separate program fee is paid directly to the Chicago Program which covers lodging and other program expenses. Additional expenses for travel and meals are also paid directly by the students. Full credit toward graduation is given for all courses taken in the Urban Studies program. The program is offered in both the fall and the spring semesters. Students must complete the Urban Studies focus, by taking the urban studies focused seminar, to fulfill the requirements for the minor in Urban Studies.


## Reserve Officer Training Corps

Learn more about Reserve Officer Training Corps (ROTC) at Valpo online.

The University offers two programs for the Reserve Officer Training Corps, one for the Air Force and one for the Army. Both programs are administered by Professor Paul Trapp. A Military Leadership Minor is available to cadets in either program. The Military Leadership Minor will not fulfill any graduation requirements at Valparaiso University, but is intended to recognize students who complete the ROTC Program.

## Use of ROTC Credit Toward Graduation Requirements

The policy of applying ROTC credit toward degree requirements varies from college to college.
The College of Arts and Sciences will grant up to sixteen (16) credits of ROTC coursework for free electives only.
The College of Business will grant credit as follows:

- Upon the completion of the military Leadership Minor-Air Force, then credit earned for AS 312, Air Force Leadership Studies (Cr. 3) will be considered equivalent to credit for MGT 315, Leadership and Interpersonal Skills (Cr. 3).
- Upon the completion of the Military Leadership Minor-Army, then credit earned for MS 301, Training, Management, and the Warfighting Functions (Cr. 3) and MS 416, Military History: Strategy and Tactics (Cr. 1) will be considered equivalent to credit for MGT 315, Leadership and Interpersonal Skills (Cr. 3)
- Credit toward graduation in the College of Business will be granted up to the maximum number of elective credits required in the B.S.B.A. degree.

The College of Engineering policy varies by major.

- Civil Engineering will grant three (3) credits of ROTC coursework toward the Professional Elective.
- Computer Engineering will grant three (3) credits of ROTC coursework toward Professional Electives.
- Electrical Engineering will grant up to six (6) credits of ROTC coursework toward the Professional Electives.

The College of Nursing will grant twelve (12) credits of ROTC coursework toward the 12 elective credits required for the B.S.N. degree.

## Military Leadership - Air Force

Valparaiso University has an enrollment agreement with the University of Notre Dame enabling Valparaiso University students to participate in their Air Force ROTC program.

The Air Force Reserve Officer Training Corps (ROTC) is an educational program designed to give men and women the opportunity to become an Air Force Officer while completing a degree. The Air Force ROTC Programs develop leadership and management skills that students need to become leaders in the twenty-first century. In return for challenging and rewarding work, the Air Force offers the opportunity for advancement, education, and training, and the sense of pride that comes from serving one's country. Upon completion of the Air Force ROTC program, students are commissioned as second lieutenants in the Air Force. Following commissioning there are excellent opportunities for additional education in a wide variety of academic fields.

Course numbers ending in 11 are taught during the fall semester; course numbers ending in 12 are taught during the spring semester. Leadership Laboratory is open to students who are members of ROTC or who are eligible to pursue a commission.

## Objectives

This minor is available to all students who are choosing to complete the Air Force Reserve Officers Training Corp (AFROTC) Program.

Military Leadership Minor - Air Force Minor (Minimum 16 Cr.$)$

| Required Courses | $\mathbf{1 6 ~ C r}$. |  |
| :--- | :--- | :--- |
| AS 111 | The Foundations of the US Air Force | 1 Cr. |
| AS 111L | Leadership Laboratory | 0 Cr |
| AS 112 | The Foundations of the US Air Force | 1 Cr. |
| AS 112L | Leadership Laboratory | 0 Cr |
| AS 211 | Evolution of US Air Force Air and Space Power | 1 Cr |
| AS 211L | Leadership Laboratory | 0 Cr. |
| AS 212 | Evolution of US Air Force Air and Space Power | 1 Cr. |


| AS 212L | Leadership Laboratory | 0 Cr. |
| :--- | :--- | :--- |
| AS 311 | Air Force Leadership Studies | 3 Cr. |
| AS 311L | Leadership Laboratory | 0 Cr. |
| AS 312 | Air Force Leadership Studies | 3 Cr . |
| AS 312L | Leadership Laboratory | 0 Cr. |
| AS 411 | National Security Affairs | 3 Cr |
| AS 411L | Leadership Laboratory | 0 Cr. |
| AS 412 | National Security Affairs | 3 Cr. |
| AS 412L | Leadership Laboratory | 0 Cr. |

## Air Force ROTC Courses

| AS 111 | The Foundations of the U.S. Air Force <br> A survey course designed to introduce students to the United States Air Force and Air Force ROTC. Featured topics <br> include: mission of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer <br> opportunities, and an introduction to communication skills. |
| :--- | :--- |
| AS 111L |  |
| Leadership Laboratory |  |
| A study of Air Force customs and courtesies, drill and ceremonies, and military commands. Also includes studying |  |
| the environment of an Air Force officer and learning about areas of opportunities available to commissioned |  |
| officers. S/U grade only. |  |

Air Force Leadership Studies

3 Cr.

A study of leadership, management fundamentals, professional knowledge, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied.

AS 311L
Leadership Laboratory
0 Cr .
Activities classified as leadership and management experiences involving the planning and controlling of military activities of the cadet corps, and the preparation and presentation of briefings and other oral and written communication. Also includes interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets. S/U grade only.
AS 312 Air Force Leadership Studies 3 Cr.

Further study of the Air Force personnel and evaluation systems, leadership ethics and additional communication skills.

AS 312L Leadership Laboratory 0 Cr .
Activities classified as leadership and management experiences involving the planning and controlling of military activities of the cadet corps, and the preparation and presentation of briefings and other oral and written communication. Also includes interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets. S/U grade only.

AS 411 National Security Affairs 3 Cr .
An examination of the national security process, regional studies, advanced leadership ethics, and Air Force doctrine.

AS 411L Leadership Laboratory 0 Cr.
Further activities classified as leadership and management experiences involving the planning and controlling of military activities of the cadet corps, and the preparation and presentation of briefings and other oral and written communication. Also includes interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets. S/U grade only.

Further focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism.

AS 412L Leadership Laboratory 0 Cr .
Further activities classified as leadership and management experiences involving the planning and controlling of military activities of the cadet corps, and the preparation and presentation of briefings and other oral and written communication. Also includes interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets. S/U grade only.

## Military Leadership - Army

Valparaiso University has an enrollment agreement with the University of Notre Dame enabling Valparaiso University students to participate in their Army ROTC program.

As one of the premier Army ROTC programs in the country, the mission is to educate, train, develop, and inspire participants to become officers and leaders of character for the U.S. Army and the nation. The program does this through a combination of classroom instruction, leadership labs, and experiential learning opportunities focused on developing the mind, body, and spirit of participants. These opportunities are designed specifically to enhance character and leadership ability in the students/cadets and to allow them to practice the essential components of leadership: influencing, acting, and improving. Participants become members of the Fightin' Irish Cadet Battalion and complete a planned and managed sequence of classroom courses and practical exercises intended to develop each participant into what an officer must be - a leader of character, a leader with presence, and a leader of intelligence - to enable them to reach their full potential as an individual and as an effective leader of groups. The program affords students an excellent opportunity to serve and focuses on the role of Army officers in the preservation of peace and national security, with particular emphasis placed on ethical conduct and the officer's responsibility to society to lead, develop themselves and others, and achieve success. The experience culminates ideally with participants earning commissions as Second Lieutenants in the Active Army, Army Reserve, or Army National Guard. As an organization committed to lifelong learning, participants may elect to pursue one of the Army's numerous opportunities for follow-on postgraduate study as well.

Course numbers ending in an odd number are taught during the fall semester; course numbers ending in an even number are taught during the spring semester.

## Objectives

This minor is available to all students who are choosing to complete the Army Reserve Officers Training Corp (AROTC) Program.

## Military Leadership Minor - Army Minor (Minimum 21 Cr.)

| Required Courses |  | 18 Cr . |
| :---: | :---: | :---: |
| MS 101 | Introduction to the Army and Critical Thinking | 1 Cr . |
| MS 102 | Introduction to the Profession of Arms | 1 Cr . |
| MS 201 | Leadership and Decision Making | 2 Cr . |
| MS 202 | Army Doctrine and Team Development | 2 Cr . |
| MS 301 | Training, Management, and the Warfighting Functions | 3 Cr . |
| MS 302 | Applied Leadership in Small Unit Operations | 3 Cr . |
| MS 401 | The Army Officer | 3 Cr . |
| MS 402 | Company Grade Leadership | 3 Cr . |
| Electives: |  | 3 Cr . |
| MS 414 | American Military History I | 1 Cr . |
| MS 415 | American Military History II | 1 Cr . |
| MS 416 | Military History: Strategy and Tactics | 1 Cr . |
| MS 495 | Topics in Military Science | 2 Cr . |
| Total Credits: |  | 21 Cr . |

MS 495 can be substituted for one of the required courses. Students must satisfy course prerequisites.

## Army ROTC Courses

MS 101 Introduction to the Army and Critical Thinking 1 Cr.
A study of the organization of the Army with an emphasis on understanding and implementing officership, leadership, and the Army values. Military courtesy, discipline, customs, and traditions of the service, fitness, and communication are taught and demonstrated through practical exercise. Includes a 48-hour field training exercise and a weekly two-hour laboratory emphasizing basic soldier skills such as land navigation and marksmanship.

MS 102 Introduction to the Profession of Arms 1 Cr.
A study of functions, duties, and responsibilities of junior leaders. Emphasizes operations of the basic military team to include an introduction to the Army's problem-solving process as well as the fundamentals of time and resource management. Includes a 48-hour field training exercise and a weekly two-hour laboratory emphasizing basic soldier skills such as first aid, U.S. weapons, and military communication.

MS 201 Leadership and Decision Making 2 Cr .
Study and application of map-reading skills, military communication, and development of individual leadership techniques by learning the fundamentals of small-unit tactical operations. Emphasis on individual physical fitness and conducting self-evaluation to facilitate growth. Includes a 48 -hour field training exercise as well as a weekly two-hour laboratory that offers the opportunity to demonstrate learned leadership techniques along with instruction on basic military skills of land navigation and rifle marksmanship.


#### Abstract

Army Doctrine and Team Development 2 Cr . Study and application of mission planning and orders with an emphasis on small-unit leadership in tactical settings. Land navigation, map-reading, marksmanship, and communication skills will be evaluated. Students are expected to demonstrate that they have mastered basic soldier skills and leadership fundamentals. Includes a 48-hour field training exercise as well as a weekly two-hour laboratory that offers the opportunity to demonstrate learned leadership skills along with advanced instruction on military skills.


MS 30
Training, Management, and the Warfighting Functions
Military decision making, problem analysis, and integrated planning of platoon operations. Analysis of the components of leadership through practical exercises and historical examples. Includes one 48-hour field exercise.

MS 302
Applied Leadership in Small Unit Operations
Advanced military decision making, problem analysis, and integrated planning with synchronization of multiple assets. This is conducted on the basis of platoon operation and tactics. Includes two 48-hour field exercises.

The Army Officer
Advanced study of military leadership and management. Discusses staff organization, functions, and processes. Analyzes counseling methods and responsibilities. Examines organization climate and training management.

Company Grade Leadership 3 Cr.
Study in the Law of War, Code of Conduct, personnel management, information on awards, separations, promotions, evaluations, assignments, and counseling techniques. Includes pre-commissioning seminars to address current military problems, trends, and customs.

American Military History I
1 Cr .
This course is the first part of a two semester survey course with an analysis of American military history from the early American colonial period through the current global war on terrorism. This course is designed to be an exploration into the evolution of modern warfare, with special emphasis on the technological developments, organization adaptations, and doctrinal innovations that have shaped American military from its first conception in 1607 through 1900. The successful completion of MS 414 and MS 415 meets the military history pre-commissioning requirements for U.S. Army ROTC cadets.

American Military History II
1 Cr .
This military history course is the second part of a two semester survey course with an analysis of American military history from the Revolutionary War through the current global war on terrorism. This course is designed to be an exploration into the evolution of modern warfare with a special emphasis on the technological developments, organization, adaptations, and doctrinal innovations that have shaped the American military from 1900 through the modern day war on terrorism. Part of this course includes a field trip to the nearby First Division Museum at Cantigny in Wheaton, IL. The successful completion of MS 414 and MS 415 meets the military history precommissioning requirements required for U.S. Army ROTC cadets. Prerequisite: MS 414.

Military History: Strategy and Tactics
1 Cr .
This course is a study of military tactics, leadership, doctrine, technologies, techniques, and procedures as they related to historical military campaigns.

Topics in Military Science
This is an independent study course that will allow contracted ROTC cadets to design a course of study to investigate selected topics in military science more completely.

## Graduate School

Visit the Graduate School online.

## Dean Jennifer Ziegler, Ph.D.

A program of graduate studies was initiated by Valparaiso University in 1963 to serve a variety of educational needs, including those of Northwest Indiana and the Great Lakes region. Today, through the Graduate School, Valparaiso University offers graduate degrees and certificates in programs in nine departments in the College Arts and Sciences, as well as in the College of Nursing and Health Professions, and the College of Business. A number of degrees may be earned in conjunction with the J.D. degree from the Valparaiso University Law School.

With an emphasis on professional master's degree programs including accredited programs leading to licensure, Valpo graduate programs emphasize career and professional development and prepare graduates to lead and serve in a global society. Although most graduate students attend full time, a significant number attend the University while holding full- or part-time employment. Select graduate programs draw strong interest from international applicants such that international students comprise over a third of graduate students at Valpo; and, Valpo graduate alumni hail from over 40 countries. Current initiatives include strengthening pathways that integrate undergraduate and graduate programs, expanding into online formats, and expanding geographically to the Hyde Park campus in Chicago.

Details about all of the graduate programs and opportunities may be found in the Graduate Catalog, which can be found online. Contact the Graduate School, Valparaiso University by phone (219-464-5313) or visit their website www.valpo.edu/grad for more information.

The graduate programs are under the general supervision of the provost and the faculty of the University. Its policies are defined by the Graduate Educational Policy Committee and are administered by the dean of the Graduate School.

## Law School

## Dean Andrea D. Lyon, J.D.

Associate Dean for Academic Affairs David R. Cleveland, J.D.<br>Associate Dean for Experiential Learning Derrick Howard, J.D.<br>Associate Dean of Law Library and Information Services Emily Janoski-Haehlen, J.D., M.L.S. Assistant Dean for Students Steven Probst, J.D., M.L.S.

Professors Blomquist, G. Brown, Cichowski, Cleveland, Herzig, Huss, Straubel, Telman, Trujillo, Welter, Wright; Associate Professors Ahamedkutty, Carter, Heeren, Howard, Janoski-Haehlen, Knowles, Kutty, Negowetti, Szto, Wilks.

In the late 1870s, Valparaiso attorney and Civil War Colonel Mark L. DeMotte decided that the importance of formalized legal education warranted a new department for the study of law at the local college. Convincing the college president that such training was crucial to the quality of legal representation throughout the country, Colonel DeMotte founded in 1879 a program for legal study that would become the Valparaiso University Law School.

From the beginning, the Law School graduated new lawyers able to effectively practice law as soon as they joined the bar. This remains true today. By immersing its students in a rigorous program, Valparaiso Law School produces graduates that are successful, respected, and prepared.

The Law School provides a range of course offerings recognized for its breadth, depth, and blend of legal theory and practice. The required curriculum provides a comprehensive and intensive study in the foundations of law, and a wealth of elective courses covering many substantive areas. Course concentrations, clinical programs, externships, and cocurricular organizations introduce students to advanced study in various areas of law and offer meaningful opportunities for innovation and specialization.

By limiting enrollment, the school provides a learning environment where the rigors of legal education can be experienced with the help of careful guidance and support by the extraordinarily accessible faculty. From the classroom to the courtroom to the boardroom, our graduates thrive on the ongoing support of faculty, staff, students, and alumni.

Continuously accredited by the American Bar Association since 1929, and the Association of American Law Schools since 1930, the School offers both the Juris Doctor (JD), and Masters in Law (LLM) degrees; and dual degrees, JD/MA in Psychology, JD/MBA, and JD/MS in Sports Administration.

The JD degree options include the traditional three-year, full-time program; a part-time, five year program; and an accelerated two and one half- year program. Unique to the Law School is the Honors Program, designed to offer a special academic challenge to highly talented students.

The LLM degree is offered through a one-year, full-time program. This particular program is designed primarily for international lawyers who have a law degree from their home country and wish to enhance their understanding of the American legal system.

The dual degrees are four-year programs. Admission to a dual degree program requires separate applications to both the Law School and Graduate School. Application forms for the J.D. degree are available online at www.valpo.edu/law, and the Graduate School applications are available online at www.valpo.edu/grad.

Detailed program information about the Law School and its admissions policies are available from the Admissions Office (1-888-VALPOLAW, or www.valpo.edu/law/.

## Summer Sessions

The University offers one twelve-week and two six-week sessions. Although most courses are six weeks, within each six-week term usually a number of specialized courses are offered in shorter periods of time. These sessions are an integral part of the yearround program of course offerings for both graduate and undergraduate students. They are specifically designed to serve a variety of publics: traditional Valparaiso University students accelerating their study, in-service teachers desiring further professional education, visiting students from other colleges earning credit while on summer vacation, junior and senior high school students beginning their college careers early, and other interested persons who would like to take coursework toward degree objectives or simply for personal enrichment.

Undergraduate students may earn a maximum of seven credit hours in each six-week term, or 14 for the entire summer, which is nearly the equivalent of one semester's work. Graduate students may earn a maximum of six credit hours in each six-week term, or 12 for the entire summer.

Courses on the undergraduate and graduate levels are offered in each session in virtually all areas of the College of Arts and Sciences, together with selected undergraduate and graduate courses in the College of Business, the College of Engineering, and the College of Nursing. Students in Arts and Sciences, Nursing, and Engineering may complete most of the coursework for the Fundamentals of Business Minor through one summer of intensive academic coursework.

Each summer session features a variety of courses in the morning and evening to accommodate the student who wishes to take course work while employed full- or part-time. A selection of online courses offers maximum flexibility in scheduling and permits students to take coursework with minimal residency on campus. Also offered in the summer for academic credit are several one-week workshops and other abbreviated format courses.

Educational tours, both domestic and international, are regularly offered during the summer. Information regarding tours is normally included in the Summer Session schedule, as well as in special descriptive brochures.

Valparaiso University features the three-year baccalaureate program which offers students in selected programs the opportunity to complete their degree in three years by careful planning and the utilization of summer sessions. To complete their program as planned, students must apply for participation in the spring of their freshman year to make certain that they have the proper advising. Students should contact their academic advisor or the Office of the Dean of the College of Arts and Sciences for more information.

Fees and Tuition for 2016 Summer Sessions
Tuition per credit hour

| Undergraduate | $\$ 510.00$ |
| :--- | :--- |
| College of Adult Scholars | $\$ 510.00$ |
| Undergraduate Nursing | $\$ 810.00$ |
| Graduate | $\$ 630.00$ |
| MBA (per course) | $\$ 2500.00$ |
| Graduate Nursing | $\$ 715.00$ |
| RN/Special | $\$ 510.00$ |
| SAGE (Adults 60 + ) Audit only | $\$ 60.00$ |
| Room (per week) | $\$ 253.00$ |

## College of Adult Scholars

Learn more about the College of Adult Scholars online.

The College of Adult Scholars is a special program for highly motivated nontraditional (adult) students starting or returning to college to seek their first degree, or returning to college for further professional training by seeking a second degree or certificate of specialization. The college has its own mission, students, and tuition structure, and although the admission criteria are intended to recognize the special needs and experiences of adult learners, admission to the college is selective. Students in the college may select from all the majors and programs as full-time students, and they may take courses in the evening, daytime, or both. To qualify for the special tuition rate, a student's credit load may not exceed eleven hours during the spring and fall semesters.

## Admission and Registration

Application to the College of Adult Scholars is made through the Office of the Graduate School and Continuing Education. Students who meet any one of the following four criteria are eligible to apply for admission: 24 years or older; have interrupted their formal education for more than three years; have a baccalaureate degree; or plan to take a Valparaiso University course approved and offered by the college at an offsite location or to a special population. Applicants who have completed an undergraduate degree or significant prior college coursework (minimum of 30 credits) with a grade point average of 2.0 or higher may be admitted unconditionally. Applicants not meeting these criteria but who show ability and promise for success may be admitted on a conditional basis. ACT/SAT scores are not required. The final decision for admission rests with the dean of the Graduate School and Continuing Education, whose judgment is based on the student's ability to benefit from the program.

Advising and registration of students in the College of Adult Scholars is done through the Office of the Graduate School and Continuing Education. Students interested in enrolling in the college should call 219-464-5313 or visit the office in Kretzmann Hall or visit their website at www.valpo.edu/continuinged.

## Sage Program

The College of Adult Scholars also enrolls students in the SAGE (Senior Adult Growth through Education) program which allows seniors 60 and older, or 55 and retired, to audit courses for a fraction of the regular tuition cost.

## Associate of Arts Degree (61 Cr.)

Students in the College of Adult Scholars have the option of pursuing the 61-credit Associate of Arts degree. This degree is particularly appropriate for students who plan to work toward a Bachelor of Arts degree in the College of Arts and Sciences. A student must complete a minimum of 45 credit hours as a College of Adult Scholar student in order to qualify for degree candidacy. Adult scholars who change to full time status with fewer than 45 credits are not eligible for the Associate of Arts degree.
A. General Education Requirements

39-40 Cr.
This degree is available only to students enrolled in the College of Adult Scholars.

1. CORE 110 The Human Experience 5 Cr .
2. CORE 115 The Human Experience 5 Cr .
3. THEO 200 The Christian Tradition 3 Cr .
4. Cultural Diversity 11 Cr .
Foreign Language (one) 8 Cr .
Cultural Diversity course 3 Cr .
5. Humanities 6 Cr.

Two of the following options:
Fine and Performing Arts 3 Cr.

A literature course numbered 200 from English, Foreign Languages, or Theatre 3 Cr.
A History course 3 Cr

A Philosophy course (not 145/245)
6. Social Sciences (from two different subject areas) 6 Cr.
7. Natural Science (with lab) 3-4 Cr.

College of Adult Scholars students who have completed Level II of a foreign language in high school but have not studied that language for at least 6 full years may be allowed to count credit earned for level 101 toward the foreign language requirement (see page 145). Students opting for a different language from their high school experience begin with course 101 in the new language.
B. Concentrations

21 Cr.
Beyond completing the general education requirements, students elect one of the following concentrations. Coursework used to meet general education requirements for the A.A. degree may not be used to meet concentration requirements.

1. Culture and Humanity

21 credit hours drawn from at least two of the following subjects: English (ENGL), History (HIST), Philosophy (PHIL), Theology (THEO), or Classical Civilization (CLC).
2. Social and Behavioral Science

21 credit hours drawn from at least two of the following subjects: Economics (ECON), Political Science and International Relations (POLS), Psychology (PSY), Sociology (SOC), and approved courses in Geography (GEO 101, 102, 200, 210, 274, 301 and approved 490)
3. Communication and Expressive Arts

21 credit hours from at least two of the following subjects: Art (ART), Foreign Languages (FL), Communication (COMM), Music (MUS), the Theatre (THTR)
From these concentrations, a student may construct the equivalent of an academic minor or, with additional coursework, an academic major that may be applied toward the requirements for the B.A. degree.

## Other requirements

1. Students must achieve a minimum grade point average of 2.0 both cumulatively in all work at Valparaiso University and in their selected concentration.
2. At least 6 credits in the concentration must be taken at the 200 level or above.
3. Thirty of the last 34 credits for the degree must be completed in residence.
4. Students must complete 45 credits as a student in the College of Adult Scholars program.
5. At least half of the concentration requirements must be completed in residence and as a student in the College of Adult Scholars program.
6. Enrollment in any course requires that the student meet the appropriate prerequisites.

Students who choose to pursue a bachelor's degree must meet all the stated catalog requirements for that degree. For example, for the Bachelor of Arts degree, the following would need to be completed:

| Upper Level Theology | 3 Cr . |
| :--- | ---: |
| Natural Science with Lab | $3-4 \mathrm{Cr}$. |
| Quantitative Analysis | 3 Cr . |
| KIN 100 Healthy Lifestyles | 1 Cr. |
| Major/minor/electives | 45 Cr. |

In meeting the requirements for the bachelor's degree, general education courses may be applied toward the student's major(s) or minor(s). Therefore, the number of major or minor elective credits may vary.

Coursework credits transferred from other institutions will be reviewed for equivalency on the same criteria currently used by the College of Arts and Sciences. All coursework for the Associate of Arts degree could be applied toward completion of the Bachelor of Arts degree.

## Associate of Arts Degree with a Concentration in Education Foundations ( 60 Cr .)

This degree serves students wanting to take steps toward a career in teaching. The degree also provides a general foundation appropriate for any student intending to pursue a Bachelor of Arts or Bachelor of Science degree. Prior to enrollment in this program, a student must take the Mathematics Placement Exam.

| A. General Education Requirements | 32-33 Cr. |
| :---: | :---: |
| 1. CORE $\mathbf{1 1 0}$ The Human Experience | 5 Cr . |
| 2. CORE 115 The Human Experience | 5 Cr . |
| 3. ENGL 200 Literary Studies | 3 Cr . |
| 4. THEO 200 The Christian Tradition | 3 Cr . |
| 5. Fine and Performing Arts | 3 Cr . |
| 6. Social Sciences | 3 Cr . |
| 7. History | 3 Cr . |
| 8. Cultural Diversity course | 3 Cr . |
| 9. Natural Science | 4 Cr . |
| 10. MATH 211 Laboratory in Elementary Mathematics I | 0+1, 0 Cr . |
| 11. MATH 213 Mathematics for Elementary Teachers I | 4 Cr . |


| B. | Concentration in Education Foundations | 21 Cr . |
| :---: | :---: | :---: |
|  | 1. ENGL 321 Intermediate Composition | 3 Cr . |
| 2. One course from the following options: |  |  |
| GEO 101 World Human Geography |  | 3 Cr . |
| SOC 210 Contemporary Social Problems |  | 3 Cr . |
| 3. PSY 110 General Psychology |  | 3 Cr . |
| 1. PSY $\mathbf{3 3 0}$ Child and Adolescent Development |  | 3 Cr . |
| 2. ED 304 Educational Psychology |  | $3+0,3 \mathrm{Cr}$. |
| 3. COMM 243 Public Communication |  | 3 Cr . |
| 4. In addition to the above, any Cultural Diversity course |  | 3 Cr . |
| B | Electives | 4-7 Cr. |
|  | If MATH 110 is required, 4 credits of electives are available. |  |
| C. Other Requirements |  |  |
| Students must also meet other University requirements as stipulated under the Associate of Arts degree (page 392). |  |  |
| Bachelor of Liberal and Professional Studies (124 Cr.) |  |  |
| Students enrolled through the College of Adult Scholars program may choose to complete the Bachelor of Liberal and Professional Studies degree, which builds upon the Associate of Arts degree and its concentration options. |  |  |
| In addition to meeting the requirements for the Associate of Arts degree, students must complete the following: |  |  |
| A | General Education Requirements | 4 Cr . |
|  | Quantitative Analysis | 3 Cr . |
|  | One course from the following options: |  |
|  | KIN 100 Healthy Lifestyles | 1 Cr . |
|  | KIN 101 Wellness and Stress | 1 Cr . |
|  | LS 489 Professional and Career Development | 1 Cr . |
| B. Liberal Arts Interdisciplinary Core |  | 12 Cr . |
|  | LS 430 Senior Seminar in the Natural Sciences and Interpretation | 3 Cr . |
|  | LS 450 Senior Seminar in Religion, Culture, and Value | 3 Cr . |
| Two courses from the following options: |  |  |
| LS 410 Senior Seminar in the Humanities |  | 3 Cr . |
| LS 420 Senior Seminar in the Social Sciences |  | 3 Cr . |
| LS 440 Senior Seminar in the Fine Arts |  | 3 Cr . |
| C | Major | 30 Cr . |
|  | Students take three additional courses ( 9 Cr .) in their Associate of Arts concentration to complete a major. Coursework for this major draws from the same departments as the Associate of Arts concentrations, and the major is designated with the same nomenclature (Culture and Humanity, Social and Behavioral Science, or Communication and Expressive Arts). As an alternative, the student may select the $\mathbf{3 0}$-credit Individualized Major as described on page 50. |  |
|  | Professional Studies Core | 18-21 Cr. |
|  | Students complete the Fundamentals of Business Minor as described Minor. Students choosing the Professional Studies Minor take complete an integrative project. |  |

## Professional Studies Minor (16-21 Cr.)

|  | Communication S |  | 3 Cr . |
| :---: | :---: | :---: | :---: |
| One course from the following options: |  |  |  |
|  | COMM 145 | Interpersonal Communication | 3 Cr . |
|  | COMM 243 | Public Communication | 3 Cr . |
|  | ENGL 210 | Introduction to Business and Professional Writing | 3 Cr . |
|  | Leadership and Team Building |  | 3 Cr . |
|  | One course from the following options: |  |  |
|  | COMM 311 | Organizational Communication | 3 Cr . |
|  | COMM 345 | Leadership Communication | 3 Cr . |
|  | GS 220 | Contemporary Issues in Philanthropy and Service | 3 Cr . |
|  | LS 421 | Global Leadership and Team Development | 3 Cr . |
|  | MGT 315 | Leadership and Interpersonal Skills* | 3 Cr . |
|  | POLS 360 | Public Administration* | 3 Cr . |
| 9. | Resource Management |  | 3 Cr . |
|  | One course from the following options: |  |  |
|  | ACC 205 | Financial Accounting | 3 Cr . |
|  | BLAW 104 | Legal Environment of Business* | 3 Cr . |
|  | ECON 136 | The Economics of Health, Education, and Welfare | 3 Cr . |
|  | ECON 221 | Principles of Microeconomics | 3 Cr . |
|  | FIN 282 | Personal Finance* | 3 Cr . |
|  | GEO 321 | Urban and Regional Planning* | 3 Cr . |
|  | MKT 304 | Marketing Management* | 3 Cr . |
|  | PSY 270 | Introduction to Industrial/Organizational Psychology* | 3 Cr . |
| 10. | Human Relations and Diversity |  | 3 Cr . |
|  | Three credits from the following options: |  |  |
|  | ECON 233 | Economics of Race and Gender | 3 Cr . |
|  | ENGL 344 | Sociolinguistics: Language Across Cultures | 3 Cr . |
|  | GS 201 | Study Circle on Race relations | 3 Cr . |
|  | GS 201 | Facilitator Training for Study Circles* | 1 Cr . |
|  | LS 422 | Intercultural Communication | 3 Cr . |
|  | LS 489 | Professional and Career Development | 1 Cr . |
|  | MGT 304 | Management and Organizational Behavior* | 3 Cr . |
|  | PHIL 120 | Culture, Identity, and Values | 3 Cr . |
|  | SOC 210 | Contemporary Social Problems | 3 Cr . |
|  | SOC 275 | Systems of Social Stratification | 3 Cr . |
|  | SOCW 260 | Diverse Populations: Human Rights and Justice | 3 Cr . |
| 11. | Using Technology |  | 3 Cr . |
|  | Three credits from the following options: |  |  |
|  | ART 230 | Graphic Design I | $1+4,3 \mathrm{Cr}$. |
|  | CE 151 | Introduction to Computer-Aided Drafting | $0+3,1 \mathrm{Cr}$. |
|  | COMM 110 | Internet Communication | 3 Cr . |
|  | COMM 230 | Graphic Design I | 1+4, 3 Cr . |
|  | COMM 401 | Social Media | 3 Cr . |
|  | CS 115 | Computers and Computation* | 3 Cr . |
|  | CS 128 | Introduction to Programming* | 1-2 Cr. |
|  | CS 157 | Algorithms and Programming* | 2+3, 3 Cr . |
|  | CS 210 | E-Commerce and E-Business Technology* | 3 Cr . |
|  | DATA 151 | Introduction to Data Science | 2+3, 3 Cr . |
|  | ENGL 310 | New Literacies, Technologies, and Cultures of Writing* | 3 Cr . |
|  | GE 290 | Issues in Technology | 3 Cr . |
|  | GEO 215 | Introduction to Geographic Information Systems | 3+2,4 Cr. |
|  | GEO 225 | Digital Cartography and GPS | 2+2, 3 Cr . |
|  | IDS 115 | Business Applications for Decision Making | 3 Cr . |

12. Capstone Integrative Project

1-6 Cr.
At least one credit from the following options:

| GS 386 | Internship (or an equivalent departmental internship) | $1-6 \mathrm{Cr}$. |
| :--- | :--- | ---: |
| GS 390 | Special Topics (as approved by committee) | 1 Cr |
| LS 485 | Practicum | 3 Cr. |
| LS 495 | Integrative Project in Liberal and Professional Studies | 3 Cr. |
| CPED 381 | Cooperative Education I | $0.5-3 \mathrm{Cr}$. |
| CPED 382 | Cooperative Education II | $0.5-3 \mathrm{Cr}$ |
| CPED 383 | Cooperative Education III | $0.5-3 \mathrm{Cr}$. |

*Courses marked with an asterisk have prerequisites.

## Certificate Programs

Valparaiso University offers certificates in several fields. These stand-alone programs typically range from 15 to 30 credits. Each is designed to serve the needs of a specific professional audience and as such each has its own admission requirements. Certificate students may not be seeking a degree at Valparaiso University and are limited to eleven credits per semester (seven during each summer session).

## Fundamentals of Business

This 18 credit certificate introduces students with little or no academic background in business to the fundamentals of business. The certificate emphasizes breadth of coverage regarding the areas of business and is open to those having at least an associate's degree. Coursework may be applied toward a business degree at Valparaiso University. This program is not open to degree-seeking students at Valparaiso University.

## Geographic and Environmental Policy Systems

This interdisciplinary basic or advanced certificate ( 15 or 30 credits) prepares professionals for planning of space and environments in a variety of natural and human-made settings. The program emphasizes training in GIS software, its application to specific situations and its larger context of use (including policy). The certificate is appropriate for persons holding undergraduate and/or graduate degrees.

## Information, Communication, and Technology

Software Design is a 20-21 credit certificate for developing proficiency in computer programming and design of software. This certificate is particularly appropriate for natural science, business, and engineering professionals needing to broaden their understanding of software design. A certified student possesses fundamental skills for general programming and in-depth knowledge of the current programming language JAVA. Graduates are able to adapt to new programming environments with a minimum of training and if desired, are prepared for entry into graduate study in computer science.

Information Technology is a 20-credit certificate on how to "use" rather than how to "design" computer systems. It combines software coursework in programming with several applications courses that deal with software systems and how they work. The program is open to any individual having an undergraduate degree (with some basic math), but is most useful to science and business majors. A certified student could work with digital communication systems as a programmer or analyst, understand communication protocols, and manage computer networks or internet resources.

Digital Systems Design is for individuals who need to refresh or upgrade an existing engineering or science education by learning more about computer systems. This 15 -credit program provides modest depth of exposure to a variety of computer engineering topics. Certified students would understand computer software and hardware well enough to apply them to their primary discipline. They would be able to design small digital circuits, write programs for controllers, design computer elements, and analyze computer networks.

Communication and Information Management is an 18-credit program designed for individuals wanting to develop proficiency in a variety of electronic applications related to communication and information. Certified students would possess an array of current technological skills relevant to publication, publicity, interoffice and electronic communication, and data management. They could understand and develop websites; work with desktop publishing; create, maintain, and manipulate data files; plan and design graphic presentations; and oversee office information systems.

## Organizational Management

This 24 -credit certificate is intended for individuals who work in an administrative or supervisory capacity and who would therefore benefit from training in business-related areas, including accounting, personnel management, marketing, business law, leadership, and business ethics. The certificate is open to persons with or without an undergraduate degree. All coursework may be applied toward a business degree at Valparaiso University.

## Public Service and Leadership

Basic and advanced (18 or 30 credit) certificates are designed for individuals with liberal arts or professional degrees who are considering or currently working in government or the public and nonprofit sectors. Both programs include coursework in government, public communication, finance, social and public policy, research methods, and administration and leadership. The advanced certificate allows further specialization in one or more of these areas.

## Liberal Studies Courses

LS 410/610 Senior Seminar in the Humanities
3 Cr .
Through focus on a particular theme, issue, or topic, this seminar explores ways in which the humanities especially literature, philosophy, theology, history, and the languages - contribute insight into our individual and common humanity.

## LS 420/620

Senior Seminar in the Social Sciences
3 Cr .
Through focus on a particular theme, issue, or topic, this seminar seeks to provide insight into ways by which the social science disciplines -especially communication, economics, cultural geography, history, political science, psychology, and sociology - contribute to the understanding of social institutions that shape society and individual behavior.

Global Leadership and Team Development 3 Cr .
Defines qualities of a leader, with the goal of helping individuals find their style of leadership. Distinguishes between managing and leading, and defines the roles of coaching and mentoring. Motivation, communication, team development, and situation-based leadership are addressed.

LS 422 Intercultural Communication 3 Cr.
Study of the interaction between people who are culturally different on the basis of ethnicity, nationality, selfdetermination, gender, age, or some other grouping factor. Provides students with the theory, models, terminology, and techniques of communication to evaluate and synthesize the processes of effective interpersonal and Intercultural communication.

LS 430/630 Senior Seminar in the Natural Sciences and Interpretation 3 Cr. Through focus on a particular theme, issue, or topic, this seminar seeks to provide insight into the ways by which the natural science disciplines -including biology, chemistry, physical geography, mathematics, and experimental psychology - contribute to the formation and advancement of scientific and technical knowledge, especially in the context of contemporary issues.

LS 440/640 Senior Seminar in the Fine Arts 3 Cr .
Through focus on a particular theme, issue, or topic, this seminar explores ways in which the fine arts - especially art, music, and drama - contribute richness and texture to all cultures.

LS 450/650 Senior Seminar in Religion, Culture, and Value 3 Cr.
The stated and unstated values of cultures are deeply entwined with their religious expressions. Through focus on a particular theme, issue, or topic, this seminar examines important aspects of religion and its role and effect within culture.

LS 485 Practicum 1-3 Cr.
Exposure to and guidance within practical or work settings related to the student's field of professional interest. Approximately 40 contact hours per credit under the guidance of a faculty member and onsite supervisor. Prerequisite: junior standing.

LS 489/689 Professional and Career Development 1 Cr. Encourages students to reflect upon their career goals, strengths, and challenges as they plan entry into the job market or prepare for job transition, to develop successful skills for a job search, and when appropriate, to prepare for graduate study. S/U grade only.

LS 490 Topics in Liberal Studies 1-3 Cr.
Junior or senior level topics courses that stress an interdisciplinary approach to the investigation and understanding of a classic or contemporary issues. May be repeated when topics vary.

An undertaking to bridge theory and practice in an area relevant to the student's professional interests. A major paper or creative work is required.

## Admission



Application for admission on a form provided by the Office of Undergraduate Admission may be filed at any time, but should be filed well in advance of the semester for which admission is desired. The online application is located at www.valpo.edu/apply. Applications for admission to undergraduate programs are sent to the Office of Undergraduate Admission. For admission to the Law School, consult the Law School Bulletin. For admission to the Graduate School, consult the Graduate Catalog.

## General Requirements

Valparaiso University admits those students who demonstrate potential for success in rigorous academic work. The credentials of each applicant are individually evaluated, with consideration given to academic record, standardized test scores, character, and evidence of motivation for college studies. The University reserves the right to deny admission to any applicant.

A student who wishes to be considered for admission into the freshman class must have the following items on file: 1) a completed undergraduate application; 2) an official high school transcript; and 3) an official report of scores on the SAT or the ACT.

Most Valparaiso University applicants will have taken and successfully completed the most challenging program of studies available in their high schools. The number of high school units expected is listed below. One (1) unit is equal to one (1) year of satisfactory work ( C or better) in an accredited secondary school. Entrance requirements differ slightly for some colleges and academic programs.

For students intending to choose a major in the College of Arts and Sciences, high school preparation is expected to include:

| English | 4 |
| :--- | :--- |
| Algebra, geometry, and advanced algebra | 3 |
| Laboratory Science | 2 |
| History | 2 |
| Foreign language | 2 |
| Additional science, history, social sciences, language, English, and mathematics courses | 3 |

For students intending to major in the College of Nursing and Health Professions, high school preparation is expected to include:

| English | 4 |
| :--- | :--- |
| Algebra, geometry, and advanced algebra | 3 |
| Laboratory Science including biology and chemistry | 3 |
| History | 2 |
| Additional science, history, social sciences, language, English and mathematics courses | 3 |

For students intending to major in the College of Business, high school preparation is expected to include:

| English | 4 |
| :--- | :---: |
| Algebra, geometry, and advanced algebra | 3 |
| Laboratory Science | 2 |
| History | 2 |
| Foreign Language | 2 |
| Additional science, history, social sciences, language, English, and mathematics courses | 3 |

For students intending to major in the College of Engineering, high school preparation is expected to include:

| English | 4 |
| :--- | :---: |
| Algebra, geometry, advanced algebra, and precalculus | 4 |
| Laboratory Science including chemistry/physics | 3 |
| History | 2 |
| Additional science, history, social sciences, language, English, and mathematics courses | 3 |

Homeschooled Requirements: Students who are homeschooled are encouraged to contact the Office of Undergraduate Admission for specific requirements.

## Transfer Requirements

A student who wishes to be considered for admission as a transfer student must submit the following items:

1. a completed transfer admission application;
2. official copies of ALL college transcripts, and if a student has successfully completed ( $C$ or better) less than 24 semester hours of college credit, a high school transcript (including SAT and/or ACT scores);
3. a transfer applicant, currently on academic probation, cannot be considered for admission until in good academic standing with the current school.
To be considered for admission, a minimum $2.50(\mathrm{C}+$ ) cumulative grade point average in college coursework is required for most programs. However, some programs require a minimum 3.00 (B) grade point average.

## Special Requirements for Christ College, the Honors College

An academically talented student who is admitted to the University may be invited to apply for admission to Christ College by the Christ College dean. Qualifications include superior academic performance, demonstrated leadership ability, and interest in pursuing stimulating interdisciplinary study. Students enrolled in Christ College are concurrently enrolled in one of the University's four other colleges.

## Special Student Status

Students admitted to take classes for credit, but not admitted to degree-seeking status, are special, non-matriculated students. High school students concurrently enrolled at Valparaiso University, students who are taking classes for certification, personal enrichment, or as a precondition to admission as degree-seeking, and international intensive English language students are generally admitted as "special, non-matriculated students."

Students admitted through the Office of Continuing Education (the College of Adult Scholars) are admitted as special, nonmatriculated students. For a change from this status to classified, degree-seeking student status, an application for admission through the Office of (Undergraduate) Admission is required.

This status is not available to a student dismissed from the University.

## Enrollment Deposit

A link to the online enrollment deposit form will be sent to each newly admitted student. The enrollment deposit form and payment ( $\$ 200$ for domestic students and $\$ 1,000$ for international students) should be submitted as soon as the student has decided to enroll at Valparaiso University. Deposits will be refunded if written notice of cancellation is received by the Office of Undergraduate Admission by March 1 for the Summer terms, May 1 for the Fall semester, or November 1 for the Spring semester.

## International Student Information

## International Requirements

Valparaiso University welcomes applications from qualified international students. At present, over forty-five nations are represented in the University's international student population.

In order to be considered for admission to Valparaiso University, an international student will need to submit the following items to the Office of Undergraduate Admission by June 15 for fall semester and Nov. 1 for spring semester.

1. Application -Applicants may complete the online application.
2. Official Transcripts - Applicants must submit original or certified copies of transcripts from all secondary schools (high schools), colleges, or universities attended. All transcripts must be sent directly from the school to Valparaiso University's Office of Admission in a separate, sealed envelope. If relevant, include a school-leaving certificate.
3. SAT or ACT Test Scores-Official test results are recommended for admission and must arrive directly from the testing agency. Please note Valparaiso University's SAT code-1874, ACT code-1256.
4. Proof of English Proficiency-All applicants must meet a minimum level of proficiency in the English language and submit proof of the proficiency to the Office of Admission. Minimum proficiency may be met by one of the following exams:

- TOEFL-score of 550 paper, 213 computer, 80 internet
- SAT-verbal score of 500
- ACT-English score of 24
- IELTS-score of 6.0
- GCE or GCSE English exam-grade of A or B
- IB Higher Level English exam-score of 5-7 or grade of A or B.
- Exceptions will be made on a case-by-case basis.

Students who do not meet minimum English proficiency requirements are encouraged to attend INTERLINK, an intensive English language program which operates on Valparaiso University's campus.

## Intensive English Language Program

The INTERLINK program on the campus of Valparaiso University provides intensive English language training, cultural orientation, and academic preparation for qualified international students, scholars, and professionals preparing to study and work in the United States. The program emphasizes cultural awareness and interpersonal skills necessary for successful academic and social adjustment to life at a University in the United States. Its curriculum focuses on reading, writing, grammar, listening, conversation, pronunciation, and study skills. Admission to the program is open to adults who have completed secondary school in good standing and are able to meet their educational and living expenses. For information, visit vu.interlink.edu, email valpo@interlink.edu or call 219-464-5518. $^{2}$

## Full-Time Enrollment

All international students who are studying on F-1 visas are required by the Department of Homeland Security to successfully complete at least 12 credit hours per semester; otherwise, the continuation of study on the F-1 visa is jeopardized and the visa may be revoked. All decisions to withdraw from a course, to take a leave of absence, or to transfer to another school should first be discussed with the international student advisor.

## International Transfer Students

To receive transfer credit for university courses completed outside the United States, international applicants should submit detailed descriptions of their previous coursework. Valparaiso University may require that such coursework be evaluated by a professional evaluation service at the applicant's expense. Suggested evaluation services include World Education Services (WES, www.wes.org) and Educational Credential Evaluators (ECE, www.ece.org).

Regardless of other degree requirements, candidates for all bachelor's degrees must meet the following requirements in residence at Valparaiso University:

1. At least one-half the number of credit hours required for any major, minor, or interdisciplinary program (a minimum of 15 credit hours in the area of foreign languages);
2. At least three credits in theology;
3. At least thirty of the last forty credits presented for the degree.

## Financial Aid

A limited number of international merit scholarships are available. Amounts vary.

## Employment

A limited number of on campus jobs are available for international students each year, but these jobs are usually for no more than 5 or 6 hours per week. The Immigration and Naturalization Service does not allow off-campus employment during the first academic year in the United States, but after that it is possible in special cases to obtain approval to work off-campus. International students should not plan on paying for educational costs in this way.

## Health Insurance

All full-time students are automatically covered for emergency medical treatment up to $\$ 500.00$. In addition, Valparaiso University requires that all international students enroll in a special insurance policy (limit $\$ 250,000.00$ ) in case there are major medical expenses.

For further information regarding admission of international students, please write to: Associate Director for International Admission, Valparaiso University, Valparaiso, IN 46383-6493, U.S.A. or email Undergrad.Admission@valpo.edu.

## Credit By Examination

Entering first-year students may become eligible for credit by examination in five ways: 1) through the Advanced Placement Program administered by the College Entrance Examination Board, 2) through the College Level Examination Program administered by the College Entrance Examination Board, 3) through the International Baccalaureate Program administered by International Baccalaureate North America, 4) through the Cambridge International AS \& A Levels administered by the Cambridge International Examinations, and 5) through the course credit program administered by individual departments. Credit earned from the above mentioned exams may not be used to fulfill Valparaiso University's General Education requirement of CORE 110 or CORE 115.

## Advanced Placement Program

Students who submit results of Advanced Placement examinations are eligible to receive credit in accordance with the following table. AP examinations must be taken before enrollment as a full-time student at Valparaiso University. For more information, contact the Admissions Office.

| Examination |  |  | Required Score |
| :--- | :--- | :--- | ---: |
| Art Studio: 2D Design | ART 290 | 3 Cr. | 3 |
| Art Studio: 3D Design | ART 285 | 3 Cr. | 3 |
| Art History | ART 311 | 3 Cr. | 3 |
| Art Studio: Drawing | ART 290 | 3 Cr. | 3 |
| Biology | BIO 171,172 | 8 Cr. | 4 |
| Chemistry | CHEM 121 | 4 Cr. | 3 |


| Chemistry | CHEM 121, 122 | 8 Cr . | 4 |
| :---: | :---: | :---: | :---: |
| Chinese Language and Culture | FLC 102 | 4 Cr . | 4 |
| Chinese Language and Culture | FLC 102, 203 | 8 Cr . | 5 |
| Computer Science A | CS 115 | 3 Cr . | 4 |
| Computer Science A | CS 157 | 3 Cr . | 5 |
| Computer Science Principles | CS 156 | 3 Cr . | 4 |
| Economics - Micro | ECON 221 | 3 Cr . | 4 |
| Economics - Macro | ECON 222 | 3 Cr . | 4 |
| English, Language and Composition | ENGL 100 | 3 Cr . | 4 |
| English, Literature and Composition | ENGL 200 | 3 Cr . | 4 |
| Environmental Science | GEO 260 | 3 Cr . | 4 |
| French Language | FLF 102 | 4 Cr . | 4 |
| French Language | FLF 102, 203 | 8 Cr . | 5 |
| German Language | FLGR 102 | 4 Cr . | 4 |
| German Language | FLGR 102, 203 | 8 Cr . | 5 |
| Geography, Human | GEO 101 | 3 Cr . | 4 |
| Government and Politics, American | POLS 120 | 3 Cr . | 4 |
| Government and Politics, Comparative | POLS 130 | 3 Cr . | 4 |
| History, American | HIST 120, 121 | 6 Cr . | 4 |
| History, European | HIST 100 | 3 Cr . | 4 |

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| History, World | HIST 110 | 3 Cr. | 4 |
| :--- | :--- | :--- | :--- |
| Italian Language | FORL UND | 4 Cr. | 4 |
| Italian Language | FORL UND | 8 Cr. | 5 |
| Japanese Language | FLJ 102 | 4 Cr. | 4 |
| Japanese Language | FL 102,203 | 8 Cr. | 5 |
| Latin Language | FLL 102 | 4 Cr. | 4 |
| Latin Language | FLL 102, 203 | 8 Cr. | 5 |
| Math, Calculus AB | MATH 131 | 4 Cr. | 4 |
| Math, Calculus AB | MATH 131,132 | 8 Cr. | 5 |
| Math Calculus BC | MATH 131 | 4 Cr. | 3 |
| Math Calculus BC | MATH 131,132 | 8 Cr. | 4 |
| Music Theory | MUS 163 | 3 Cr. | 5 |
| Physics 1 | PHYS $111,111 \mathrm{~L}$ | 4 Cr. | 3 |

(Students intending to continue on to PHYS 112 are encouraged to repeat PHYS 111 if they receive a score of 3 on the AP Physics 1 exam.)

| Physics 2 | PHYS 111, 111L, 112, 112L | 8 Cr. | 4 |
| :--- | :--- | :--- | :--- |
| Physics C, Mechanics | PHYS 141 | 3 Cr. | 4 |
| Physics C, Electricity and Magnetism | PHYS 142 | 3 Cr. | 4 |

(Students with a score of 4 or higher on either of the AP Physics $C$ exams may also receive credit for PHYS 141L or 142L, depending on their AP lab experience. See the Physics department chair for more information.)

| Psychology | PSY 110 | 3 Cr. | 4 |
| :--- | :--- | :--- | :--- |
| Spanish Language | FLS 102 | 4 Cr. | 4 |
| Spanish Language | FLS 102, 203 | 8 Cr. | 5 |
| Spanish Literature | FLS 102 | 4 Cr. | 4 |
| Spanish Literature | FLS 102, 203 | 8 Cr. | 5 |
| Statistics | STAT 140 or IDS 205 | 3 Cr. | 4 |

## Previous Advanced Placement Examinations

The following AP examinations are no longer offered and are listed for reference for students who may have taken the older examinations.

| Examination |  | Required Score |  |
| :--- | :--- | :--- | ---: |
| Art Studio: General | ART 290 | 3 Cr. | 3 |
| Computer Science AB | CS 115 | 3 Cr. | 3 |
| Computer Science AB | CS 157 | 3 Cr. | 4 |
| French Literature | FLF 102 | 4 Cr. | 4 |
| French Literature | FLF 102, 203 | 8 Cr. | 5 |
| Latin Literature | FLL 102 | 4 Cr. | 4 |
| Latin Literature | FLL 102, 203 | 4 Cr. | 5 |
| Physics B | PHYS 111, 111L | 4 Cr. | 3 |
| (Students intending to continue on to PHYS 112 are encouraged to repeat PHYS 111 if |  |  |  |
| they receive a score of 3 on the AP Physics B exam.) |  |  |  |
| Physics B | PHYS 111, 111L, 112, 112L | 8 Cr. | 4 |

## International Baccalaureate Program

First-year students who submit results of International Baccalaureate Higher Level examinations (Standard Level examinations are not accepted) with scores of 5,6 or 7 receive credit for the following subjects:

| Examination |  | Credit Earned |
| :---: | :---: | :---: |
| Individuals and Societies |  |  |
| English A1 | ENGL 100 | 3 Cr . |
| Economics | Social Science | 3 Cr . |
| Geography | GEO 101 | 3 Cr . |
| History Americas | HIST 120, 121 | 6 Cr . |
| History Europe | HIST 100, 110 | 6 Cr . |
| Language B | French, German, Hindi, Spanish 102 | 4 Cr . |
| Philosophy | PHIL 125 | 3 Cr . |
| Psychology | PSY 110 | 3 Cr . |
| Social Anthropology | SOC 290 | 3 Cr . |
| Sciences |  |  |
| Biology | BIO 171 | 4 Cr . |
| Chemistry | CHEM 121 | 4 Cr . |
| Computer Science | CS 115 | 3 Cr . |
| Physics | PHYS 111, 111L | 4 Cr . |
| Mathematics |  |  |
| Further Mathematics | Mathematics Quantitative | 4 Cr . |
| Further Mathematics \& Mathematics HL (Students must take both exams to earn the credit) | MATH 114, 131, 132, 264, 270 | 18 Cr . |
| Mathematics HL | Mathematics | 4 Cr . |
| The Arts |  |  |
| Music | MUS 101 | 3 Cr . |
| Theatre Arts | THTR 101 | 3 Cr . |
| Visual Arts | ART 290 | 3 Cr . |
| Language Acquisition |  |  |
| Classical Greek | FLGK 102 | 4 Cr . |
| Latin | FLL 102 | 4 Cr . |

## Cambridge International Examinations

First-year students who submit results of Cambridge International Examinations A-Levels (AS Levels will not be accepted) with scores of C or higher will receive credit for the following subjects:

| Examination | ACC 290 | Credit Earned |
| :--- | :--- | ---: |
| Accounting | BUS UND | 3 Cr . |
| Business Studies | CHEM 121 and CHEM 122 | 3 Cr . |
| Chemistry | ECON 221 and ECON 222 | 8 Cr . |
| Economics | ENGL 200 | 6 Cr . |
| English Literature | MATH 114 and MATH 131 | 3 Cr |
| Mathematics Exam | Math | 8 Cr |
| Mathematics \& Further |  |  |
| Exams | MATH 114, MATH 131, MATH 132, | 18 Cr |
| Physics | MATH 264, MATH 270 |  |

## Course Credit Examination Program

During the orientation period that precedes each semester, placement tests are offered to incoming students (freshmen and transfers) in the areas listed below. These tests provide an opportunity for students to attain advanced placement, receive credit, or meet certain General Education Requirements at Valparaiso University. Advanced placement and/or credit are awarded in foreign languages, mathematics, and chemistry as explained in the listings for those departments.

In all of the cases, the credit awarded is entered on the student transcript, which is maintained by the Office of the Registrar. This credit can be applied toward required or elective courses.

Credit earned by examination may achieve advanced standing, meet General Education Requirements, and accelerate progress into advanced areas of study in an intended major or interdisciplinary program. Credit by examination may reduce the time required to earn an undergraduate degree.

## College Level Examination Program (CLEP) of the CEEB

The CLEP program provides an opportunity to gain college credit for those individuals who, through experience, independent study or enriched high school courses, have attained college-level knowledge in a particular field. It is not recommended that these examinations be taken only on the basis of normal high school courses. Information and test center locations can be obtained from College Entrance Examination Board, Box 1822, Princeton, NJ 08541.

Valparaiso University awards credit for CLEP General Examinations in English, Humanities, Social Science-History, and Natural Science, subject to the following conditions:

1. The General Examinations must be taken before matriculation at Valparaiso University.
2. Credit for a CLEP General Examination may not be applied to a major nor to any specific course requirement except as listed below in items 4, 5, and 6.
3. Credit for a CLEP General Examination is valid only if no other credit by examination is awarded in courses applicable in the same area of general education.
4. A score of 50 or above on the Humanities General Examination entitles a student to three (3) credits in the area of Fine Arts or Fine Arts-Literature.
5. A score of 50 or above on the Social Science-History General Examination entitles the student to three (3) credits in the area of Social Science.
6. A score of 50 or above on the Natural Science General Examination entitles a student to three (3) credits in the area of Natural Science.
Valparaiso University awards credit for CLEP Subject Area Examinations as indicated below. Credit for Subject Area examinations is awarded only if the examination is taken before the student enrolls in the specific college-level subject for which credit by examination is sought.

Admission

| Examination |  |  | Required Score |
| :---: | :---: | :---: | :---: |
| American History I | HIST 120 | 3 Cr . | 50 |
| American History II | HIST 121 | 3 Cr . | 50 |
| American Literature | ENGL 311, 312 | 6 Cr . | 50 |
| American Government | POLS 120 | 3 Cr . | 50 |
| Analysis and Interpretation of Literature | ENGL 200 | 3 Cr . | 50 |
| Calculus with Elementary Functions | MATH 131 | 4 Cr . | 50 |
| College Composition | ENGL 100 | 3 Cr . | 50 |
| College Composition Modular | ENGL 100 | 3 Cr . | 50 |
| French Language, Level I | FLF 102 | 4 Cr . | 45 |
| French Language, Level II | FLF 102, 203 | 8 Cr . | 50 |
| German Language, Level I | FLGR 102 | 4 Cr . | 45 |
| German Language, Level II | FLGR 102, 203 | 8 Cr . | 50 |
| Spanish Language, Level I | FLS 102 | 4 Cr . | 45 |
| Spanish Language, Level II | FLS 102, 203 | 8 Cr . | 50 |
| College Mathematics | MATH 120 | 3 Cr . | 50 |
| English Literature | ENGL 200 | 3 Cr . | 50 |
| Financial Accounting | ACC 205 | 3 Cr . | 50 |
| Freshman College Composition | ENGL 100 | 3 Cr . | 50 |
| General Biology | BIO 171, 172 | 8 Cr . | 50 |
| General Chemistry | CHEM 121 | 4 Cr . | 45 |

(Students intending to continue on to CHEM 122 are encouraged to repeat CHEM 121 if they receive a score of 45 on the CLEP Chemistry exam.)

| General Chemistry | CHEM 121, 122 | 8 Cr. | 50 |
| :---: | :---: | :---: | :---: |
| Human Growth and Development | PSY 330 | 3 Cr . | 50 |
| Information Systems and Computer Applications | IDS 410 | 3 Cr . | 50 |
| Introductory Educational Psychology | ED 304 | 3 Cr . | 50 |
| Introductory Business Law | BLAW 104 | 3 Cr . | 50 |
| Introductory Psychology | PSY 110 | 3 Cr . | 50 |
| Introductory Sociology | SOC 110 | 3 Cr . | 50 |
| Precalculus | MATH 114 | 4 Cr . | 50 |
| Principles of Macroeconomics | ECON 222 | 3 Cr . | 50 |
| Principles of Management | MGT 304 | 3 Cr . | 50 |
| Principles of Marketing | MKT 304 | 3 Cr . | 50 |
| Principles of Microeconomics | ECON 221 | 3 Cr . | 50 |
| Western Civilization I | HIST 100 | 3 Cr . | 50 |
| Western Civilization II | HIST 110 | 3 Cr . | 50 |

## Previous CLEP Examinations

The following CLEP examinations are no longer offered and are listed for reference for students who may have taken the older examinations.

| Examination | Required Score |  |  |
| :--- | ---: | ---: | ---: |
| Freshman College Composition | ENGL 100 | 3 Cr. | 50 |

A score of 50 or above on the English General Examination entitles a student to three (3) credits for English 100.

## Advanced Standing-Transfer Students

The University welcomes transfer students from junior colleges, community colleges, and other accredited institutions of higher education. Students planning to transfer to Valparaiso University must apply for admission through the Office of Admissions at least three weeks before the official start day of the term for which they are applying and must present evidence of honorable dismissal from the institution last attended. Transfer students will not be admitted to Valparaiso University until official transcript(s) and other required credentials are on file in the Office of Admissions. After their records are evaluated, applicants will be notified regarding the courses which are found acceptable for transfer. Courses with grades of C- or above are accepted as transfer credit. Grades are not transferable; only credit transfers. For students in the College of Business, see page 295. For registered nurses in the degree completion program of the College of Nursing and Health Professions, see page 352.

Credits earned more than fifteen years before application for admission are accepted toward graduation on a provisional basis, subject to validation by the first thirty semester hours completed in residence at Valparaiso University with a 2.000 (C) average.

Advanced standing is the record of courses and credits accepted by Valparaiso University from another institution.
The maximum number of advanced standing credits that may be applied toward a Valparaiso University degree is 94 credits (Colleges of Arts and Sciences, Business or Nursing) or 102 credits (College of Engineering). The remaining advanced standing credits will be applied as elective credit only. See page 415 for residence requirements and restrictions related to majors and minors. Credit for workshops, institutes, or travel study ordinarily will be granted only for work taken at Valparaiso University. In cases of exception to this restriction, transfer credit for institutes or workshops usually will not exceed one credit per calendar week of instruction. Transfer credit for travel study programs usually will not exceed two credits per calendar week.

## General Education

Students will receive a copy of a Transfer Credit Equivalency Report that lists the transfer credits accepted by Valparaiso University and the matching Valpo course equivalent. The Dean of the student's college will review the Transfer Credit Equivalency Report and prepare a Statement of Equivalency in regard to the General Education requirements for the respective degree. Transfer students with more than 75 credits of advanced standing need to complete one course (three credits) of theology at Valparaiso University. One course in theology must be taken in residence at Valparaiso University.

CORE 110 or CORE 115 credit may only be granted by transfer credit for courses taken prior to the student enrolling at Valparaiso University, and will only apply toward transfer students; freshmen will not be awarded CORE 110 or CORE 115 credit. Any credit transferred to Valparaiso University after the student has begun their career at Valparaiso University will not be considered as applicable toward fulfilling CORE 110 or CORE 115.

## Major Requirements

Statements of equivalence for academic majors, interdisciplinary programs, or professional block schedules are prepared by the colleges or departments concerned.

## Preliminary Mathematics Placement Information

Upon entry to Valparaiso University, all students who do yet not have college credit for mathematics are given a preliminary placement into appropriate mathematics classes through an evaluation process that includes any or all of ACT or SAT math scores, high school GPA, and math classes taken along with grades earned during senior year. If a student determines the preliminary placement level is suitable, there is no need to continue and take the math placement assessment. If a student wishes to improve the preliminary placement, then he or she should take the math placement assessment. The descriptions of the specific placement levels and the means for the preliminary determination follow.

## Placement Level 3

Students at this level are eligible for everything listed for Placement Group 2, as well as MATH 131: Calculus I. This is as high as our placement system goes; placement in mathematics to anything higher than Calculus I requires previous college credit for the appropriate pre-requisite classes (for example, students who have received AP credit for Calculus I may start in Calculus II). Any student in this placement group should NOT take the math placement assessment.

The minimum standards for preliminary placement at this level are:

- PL 3: ACT MATH 30-36 (SAT MATH 690-800)
- PL 3: ACT MATH 25 - 29 (SAT MATH 590-680), and high school GPA of 3.5 or higher, and having taken a course in Precalculus, Trigonometry, or Calculus during senior year.


## Placement Level 2

Students at this level are eligible for everything listed for Placement Level 1, as well as MATH 115: Trigonometry and Functions and MATH 124: Finite Mathematics. Any student in this placement group should NOT take the math placement assessment unless direct entry into MATH 131: Calculus is desired.

The minimum standards for preliminary placement at this level are:

- PL 2: ACT MATH $25-29$ (SAT MATH 590-680), and high school GPA of 3.50 or higher, but NOT having taken a course in Precalculus, Trigonometry, or Calculus during senior year.


## Placement Level 1

Students at this level are eligible to enroll in many quantitative analysis and natural science courses, including BIO 171, CHEM 121, and PSY 201. In mathematics specifically, students are eligible to enroll in MATH 111: Quantitative Reasoning II, MATH 120: Mathematics and Society, MATH 122: Applied Calculus, and STAT 140: General Statistics. Your choice of whether to take a mathematics/statistics class or a quantitative analysis course in another department should be made in consultation with your academic advisor. A student in this placement group should NOT take the math placement assessment unless direct entry into a course requiring a higher placement level is desired.

The minimum standards for preliminary placement at this level are:

- PL 1: ACT MATH 25 - 29 (SAT MATH 590-280) and high school GPA below 3.50
- PL 1: ACT MATH 20-24 (SAT MATH 490-580) and high school GPA of 3.50 or higher


## Placement Level 0

Students in this group take MATH 110: Quantitative Reasoning I before proceeding to further college mathematics and statistics classes. Also, most quantitative analysis and natural science courses require completion of MATH 110 or placement higher than MATH 110 in order to enroll. Any student in this placement group is encouraged to take the math placement assessment.

The minimum standards for preliminary placement at this level are:

- PL 0: ACT MATH 20 - 24 (SAT MATH 490 - 580) and high school GPA below 3.50
- PL 0: ACT MATH 19 (SAT MATH 480) or below


## Placement Level NP (No Placement)

Students for whom we do not have sufficient information to determine a placement level. Any student in this placement group is must provide the necessary information or take the math placement assessment.

Notes:

- It is very possible your preliminary placement is lower than you think it should be; sometimes we have incomplete information. In that event, you can act to supply the missing information, or take the math placement assessment.
- Any prior college credit for mathematics or statistics courses (including credit achieved through AP exams and transfer credits) overrides everything in this preliminary placement system.
- All placement activity takes place before a student enters the course stream. Once a student begins in the course stream, progression from course to course relies solely on the standard course pre-requisites. For example, someone who places into MATH 115: Trigonometry and Functions cannot get an F in that class but then proceed to Calculus I anyway by (re)taking the math placement assessment.
To take the math placement assessment, visit valpo.edu/mathematics-statistics/academics/ap-credit-and-math-placement. Note that more than one attempt at the placement assessment is possible, so a first try does not necessarily give a final placement result.


## Registration

Visit the Office of the Registrar online.
All students are expected to register on the official registration days of each semester. For students currently enrolled, a registration period is announced during each semester. (For the registration days and the calendar of the Law School, consult that School's bulletin.)

## Health Requirement

All students entering the University for the first time and all students who have not been registered at this University for a full semester (excluding summer) must submit to the University Health Center a report of their medical history, physical examination, and required immunizations from a licensed physician.

## Maximum and Minimum Credit Hours

A full-time student is one who is registered for at least twelve semester credit hours. Maximum credit hours allowed per semester without a petition are given in the following table:

| Program | Maximum Credit Hours |
| :--- | :--- |
| College of Arts and Sciences | 18 Cr. |
| Education (Elementary, Middle Level) | 18 Cr. |
| Secondary Education majors | 19 Cr |
| Bachelor of Music | 18 Cr. |
| Bachelor of Music Education | 19 Cr. |
| College of Business | 18 Cr. |
| College of Engineering | 19 Cr. |
| College of Nursing and Health Professions |  |
| (except in approved block schedules) | 18 Cr. |

Students who maintained a grade point average of 3.000 ( $B$ ) or better during the previous semester may register for extra hours, provided that their formal petitions for such work are granted. This petition must be approved by the academic advisor and the dean of the appropriate college. Forms are available online through the Office of the Registrar: valpo.edu/registrar. Freshmen are not allowed to carry extra hours during the first semester. Extra credit hours above 19 credits per semester will also incur an additional tuition charge (see page 417).

## Course Prerequisites

Students are held responsible for meeting the prerequisites of all courses for which they enroll. In unusual cases, a student may petition to waive a prerequisite. Such a petition must be approved by the instructor of the course and/or the chair of the department in which the course is offered.

## Change of Schedule

Students may change their registration in courses up to the time of the calendar deadlines published in the General Catalog. Such changes are matters of serious consideration. Before deciding on such an action, students should obtain the counsel of their course instructor, academic advisor, and the chair of the department in which the course is offered. Forms are available online through the Office of the Registrar: valpo.edu/registrar.

Any student-athlete who wishes to drop below 12 semester credit hours (full-time status) must obtain permission of the athletics compliance coordinator or designee.

Deadlines for course addition, course withdrawal, filing for S/U grade, and withdrawal from the University are published in the University Calendar. Once these deadlines have passed, students are held responsible for completion of courses under the terms of the registration they have selected. Changes in registration after these deadlines are allowed only in exceptional cases where students demonstrate that extreme contributory circumstances have rendered their registration in a course invalid. Serious physical disability, prolonged illness, or the death of a loved one: documented occurrences of this kind can be considered reasonable grounds for requesting an exception to the regular calendar deadlines. A petition for exception to a deadline may be addressed to the dean of the appropriate college; such a petition must be accompanied by supporting reasons for its presentation. Petition forms are available online through the Office of the Registrar: valpo.edu/registrar. The integrity of the Valparaiso University transcript and ultimately of the University itself demand that special exceptions be permitted only when special circumstances prevail. Neither unsatisfactory academic performance, whether caused by inability or lack of application, nor lack of adequate evaluation of a student's performance in a course before the deadline are, in and of themselves, sufficient reason for petition.

Students may officially cancel enrollment in a course during the first six class days without reflection on their permanent record. All requests for adding a course during the first six class days remain at the discretion of the appropriate academic dean or department chair. From then until the published deadline, a student may officially withdraw from a course with a grade of W (withdrawal) on the student's permanent record. Students are not permitted, without an approved petition, to cancel enrollment in courses after the end of the ninth week of a semester. Not attending class does not constitute formal withdrawal from a course.

After the drop/add period and until the tenth week of a semester, the tuition fee is prorated for students withdrawing from the University. The refund schedule can be viewed online through the Student Financial Services: valpo.edu/student-financial-services. Courses dropped before the drop/add period (sixth class day) will receive $100 \%$ refund.

## Appeals

Denial of a petition by a student's dean may be appealed to the Committee on Academic and Professional Standards. The appealing student should append reasons for submitting his appeal to the committee.

## Academic Policies

## Grading System and Quality Points

For the Law School and the Graduate School, refer to the appropriate bulletin.
The course grades reported and recorded in the Office of the Registrar are as follows. The corresponding number of quality points per credit hour are also indicated.

| Grade | Quality Points/Cr. |  |
| :--- | :--- | ---: |
| A | Excellent | 4.0 |
| A- |  | 3.7 |
| B+ |  | 3.3 |
| B | Good | 3.0 |
| B- |  | 2.7 |
| C+ | 2.3 |  |
| C | Satisfactory | 2.0 |
| C- |  | 1.7 |
| D+ | Less than satisfactory, but passing | 1.3 |
| D | Passing | 1.0 |
| D- |  | 0.7 |
| F | Failure | 0.0 |
| I | Incomplete | --- |
| W | Authorized withdrawal | --- |
| S | Satisfactory | --- |
| U | Unsatisfactory | --- |

Grade Point Average is calculated by dividing the total number of quality points by the total number of graded credits. GPA calculations are truncated to three decimal places and never rounded.

Grades A through D- give credit toward graduation. A student who receives a grade of $D$ - in a course is advised not to enroll in other courses for which the given course is a prerequisite. Candidates for graduation must have a cumulative grade point average of 2.000 or better in all their work at Valparaiso University.

The grade I (incomplete) may, at the discretion of the instructor, be given to a student under the following conditions:

1. The work completed in the course so far is passing.
2. The student has been unable to complete the remaining work in the course because of circumstances beyond his or her control.
An I (incomplete) grade received in one semester or summer session must be removed by the beginning of the official examination period of the next succeeding semester, or it automatically becomes a grade of IF (Incomplete - Failure). The student's deadline for submitting the outstanding work to the instructor shall be one week before that date. No Semester Honors will be given if the student received a grade of Incomplete at the official end of the semester concerned. Students who are not registered in the next term (Fall or Spring) who are finalizing work from an Incomplete grade will need to complete a Campus Affiliation request.

Authorized withdrawal from a course or from the University within the published deadlines gives the grade of W to each course withdrawn. This mark carries no credit.

The satisfactory grade, $\mathbf{S}$, is given under the following conditions:

1. The course is designated in this catalog to be graded $S / U$, or the student officially opts or petitions to have the $S / U$ grade in the course.
2. The student's work in the course is satisfactory, of a quality which is comparable to a grade of C- (1.7 quality points per credit hour) or better.
Course credit hours with grades of $S$ count toward graduation but are not counted in computing the student's grade point average.

The unsatisfactory grade, $\mathbf{U}$, is given under the $S / U$ grade option (condition 1 above) when the student's work does not meet the course objectives (condition 2 above). Course credit hours with grades of $U$ do not count toward graduation and are not counted in computing the student's grade point average.

The failing grade, $\mathbf{F}$, is given under any of the following circumstances:

1. Work done in a course is below a minimum standard required for passing.
2. A student fails to complete work to remove a grade of I (incomplete) before the deadline stated above.
3. A student stops attending a course without filing the necessary form and obtaining the necessary approval.
4. A student stops attending the University without giving official notification. F grades are given in all courses for that term.

To withdraw from a course students should submit the withdraw request on DataVU using the "Withdraw from Sections" link. After the withdraw deadline, students may submit the appropriate appeal to the Committee on Academic and Professional Standards. Withdrawal from the University requires notification to the Office of Student Affairs. The appropriate form is obtainable from that office.

## Admission to Courses on a Satisfactory/Unsatisfactory Basis

Undergraduate students are encouraged to venture outside the areas of their concentration, investigate new disciplines, and discover new, perhaps unsuspected, interests. If a student chooses, the Satisfactory/Unsatisfactory grading option may reduce the anxiety about electing a course in an area in which the student has had little or no prior experience. Students who are interested in conveying maximum information on their transcripts to professional and graduate school should speak to their advisors and the dean of their college prior to electing this option.

Certain courses normally result in the $S / U$ grade, as noted in the catalog course descriptions. In addition to any of these courses, the student may take one course, normally letter graded (i.e., A to F), each semester on a satisfactory/unsatisfactory basis subject to the following conditions:

1. Such courses must not be selected from:
a. The student's major or minor field or fields;
b. A repeated course, if not originally taken on the $S / U$ basis;
2. Students in the professional colleges may choose the $S / U$ basis for free electives (if not taken in the major or minor fields) and for courses which fulfill their general education requirements in Core, Humanities, Social Science, Theology, Foreign Language, Diversity, or Kinesiology. For further regulations regarding the S/U option for business students, please see page 296.
3. Such petition must be signed by the student's academic advisor;
4. A decision to elect a course on the $S / U$ basis must be made by the deadline specified by the Office of the Registrar in the Important Dates document for the applicable term. After this deadline, the $\mathrm{S} / \mathrm{U}$ grading basis may not be changed.

NOTE: In selection of the S/U option, students are strongly advised to discuss the implications of that option with their advisor concerning entrance into professional schools.

## Admission to the Course Intensification Plan

Students may propose a special project for earning one extra credit in one liberal arts course in which they are enrolled in a given semester. In addition, students enrolled in the College of Business (see page 296) and the College of Nursing and Health Professions (see page 353) have specific criteria for course intensification of their courses. This opportunity is part of the University's course intensification plan. The following regulations pertain to this option for all students regardless of their college:

1. The course must be offered for three or more credits. Variable credit courses cannot be intensified.
2. The initiative and responsibility for developing a satisfactory proposal lie with the student.
3. Student must complete a Petition to Intensify a Course, available online through the Office of the Registrar.
4. The proposal must be approved by the student's advisor, the instructor of the course, the chair of the department, and the dean of the student's college.
5. Approved proposals must be filed in the Office of the Registrar during the period specified in the academic calendar.

The course intensification plan is a type of honors work, and under no circumstances should be considered a substitute for regular course work.

## Admission to Courses as an Auditor

A regularly classified student may register in a course as an auditor only with the permission of his or her advisor and the chair of the department which offers the course. Deadlines to apply to audit a course are published in the calendar at the front of this catalog. An auditor may not be admitted to the final examination and is never granted credit for the course audited. No additional fee is charged when the student pays full tuition up to 19 credit hours. Any credit hour over 19 will be subject to the overload fee as published. Once in a course as an auditor, the student cannot change the status of his or her enrollment to receive a regular grade in the course.

## Credit Hours

A credit hour (abbreviated Cr. in lists of courses) represents one hour of recitation or lecture, or two or more hours of laboratory, each week for one semester. If time outside the laboratory is required to prepare laboratory notes or reports, two hours may be equivalent to one period of class work. Drawing, shop work, and other courses demanding no outside preparation require a minimum of three hours for one credit hour. See specific course descriptions for the exact number of hours required.

For short (seven weeks) courses, the time per week per credit hour is twice that for the semester.

## Repetition of Resident Courses for Credit

Unless repetition of a course for credit is permitted as shown in its catalog description, only the credits, grade, and quality points received the last time the course is taken by a student at Valparaiso University shall be used in determining credit for graduation and the cumulative grade point average. A grade of W shall be excluded from this policy. The student's transcript shall record all grades, original and repeat.

## Academic Standing of a Student

A student's academic standing is determined by the ratio of the total number of quality points to the total number of credit hours attempted in all work at Valparaiso University, except courses graded S/U. Thus, a student who makes an average mark of C ( 2.000 quality points per credit hour) throughout the course of 124 semester hours will have 248 quality points, 124 credit hours, and a standing of 2.000 . The standing for a semester's work is understood to be the ratio of the number of quality points earned to the number of graded credit hours completed. Standing is also referred to as the grade point average. Both cumulative and semester GPA are factors in determining a student's academic standing. At least a 2.000 GPA is required for good academic standing. Criteria vary by college and program. Please refer to the applicable sections of the General Catalog for details. Note the above exception regarding repetition of a course. For information regarding satisfactory academic progress, please see page 429 in the Financial Aid section.

## Academic Deficiency

In the College of Arts and Sciences, College of Business, College of Engineering, and College of Nursing and Health Professions, students whose cumulative resident grade point average falls below the requirements of their college and program (at least 2.000) are considered academically deficient. Such students may be denied the privilege of continuing their studies at the University unless they succeed in improving the quality of their academic work to the satisfaction of the faculty during the following semester. The dean of each college establishes procedures to give students who are academically deficient timely warning of their being denied continuation of their studies.

The GPA requirement varies by college and program. Please refer to the applicable sections of the General Catalog for details. For regulations concerning academic deficiency in the Law School, see that School's bulletin.

## Dismissal for Low Scholarship

Whenever, in the judgment of an academic dean, students who are academically deficient would benefit from an interruption of their work in a particular college of the University, the dean will notify the students in writing that they have been dismissed and will specify the period of time for which they have been dismissed and the conditions which they must satisfy in order to be readmitted.

## Class Standing of a Student

An undergraduate student must have successfully completed 24 semester credits to be classified as a sophomore; 56 semester credits to be classified as a junior; and 88 semester credits to be classified as a senior.

A student in the Law School should consult that School's bulletin.

## Classification of Courses

The courses offered by the University are classified as follows:

- Lower division courses, numbered 100-299;
- Upper division courses, numbered 300-499;
- Graduate-undergraduate courses, numbered 500-599;
- Graduate only courses, numbered 600 and above.


## Leave of Absence - Undergraduate Students

At the end of a semester, a student who has completed at least one full semester of work in residence and who is in good academic standing may apply for a leave of absence. This absence requires approval of the academic advisor and the academic dean. The necessary form may be obtained online through the Office of the Registrar: valpo.edu/registrar. This student may return to Valparaiso University without formally applying for readmission within a period of two years following the start of the leave of absence. However, a student must contact the Office of the Registrar each semester during their Leave of Absence in order to maintain their hiatus/Leave of Absence status.

Leaves are not given to students who withdraw from the University during a semester.
All leaves must be requested before the beginning of the semester in which they are to take effect.

## Readmission of Former Students to Undergraduate and Professional Programs

Students who have fully matriculated at Valparaiso University and who have interrupted their studies for whatever reason must apply for readmission to the University. The request for readmission is to be sent to the Office of Undergraduate Admission. Exceptions are students who took a formal leave of absence under the conditions specified above and students enrolled in the Diaconal Education and Formation Process, who usually spend one year in in-service training. Cooperative Program work semesters and off-campus special semesters are considered to be continuation of study, for which students have officially registered.

Application for readmission must be made at least one week before the start date of the term in which the student wishes to enroll. Applications will not be accepted after this date.

The student being readmitted must present the necessary information such as records of attendance and grades at other colleges, and a new medical examination report if the student has been out of school during the previous sixteen month period, before action will be taken on the request to be readmitted.

Credit hours earned more than fifteen years before application for readmission (either at Valparaiso University or at another accredited institution) are subject to reevaluation and, if accepted by the appropriate University standing committee, may be subject to validation by the first year's work ( 30 semester credits) completed in residence with a 2.000 grade point average.

The case of each student applying for readmission is presented to the Office of Undergraduate Admission for consultation with the college of which the student is seeking readmission. The Office of Undergraduate Admission then notifies the student of the readmission decision. Students with outstanding financial obligations to the University are not considered for readmission until these obligations have been paid in full.

## Advanced Standing-Resident Students

Any resident student who has taken academic course work at any other accredited educational institution must request the Registrar of that institution to send an official transcript to the Valparaiso University Office of the Registrar, where an evaluation is made for possible acceptance of transfer credits. Courses with grades of C- or above are accepted for transfer credit. Grades are not transferable; only credit transfers.

CORE 110 or CORE 115 credit may only be granted by transfer credit for courses taken prior to the student enrolling at Valparaiso University. Any credit transferred to Valparaiso University after the student has begun their career at Valparaiso University will not be considered as applicable toward fulfilling CORE 110 or CORE 115 requirements.

Credit for workshops, institutes, or travel study ordinarily is granted only for work taken at Valparaiso University. In cases of exception to the preceding restriction, transfer credit for institutes or workshops will not exceed one credit per calendar week of instruction. Transfer credit for travel study programs will usually not exceed two credits per calendar week.

Resident students who wish to take courses at other approved schools concurrently with their Valparaiso work should refer to the appropriate paragraph under Residence Requirements on page 415.

## Change to Another Program

If a student transfers from one major or interdisciplinary program to another, all requirements of the new specialization must be met. Such a transfer subjects credits previously earned to a reevaluation. In certain cases the change of program may result in some loss of credit (e.g., if a course taken as a General Education Requirement is superseded by another course required for the new major). Therefore, such transfers may not be made without the written approval of the advisors and deans concerned. Necessary forms are available through the Office of the Registrar: valpo.edu/registrar.

In the case of transfer from one college to another, students should be sure to review the requirements for the degrees of the new college and note any restrictions on credit hours which may be transferred from the former college.

## Examinations

Written tests and quizzes are given from time to time during the semester at the discretion of the instructor.
A final examination is required in all courses of 3 credit hours or more. Exceptions may be made for such courses as independent study, practica and internships, performance, studio, and activity courses. Final examinations are held at the close of each semester and, for courses of 3 credit hours or more, must be conducted according to a schedule published by the Office of the Registrar.

Final examinations in courses of less than three credits are conducted during regularly scheduled class periods.
In order to give students adequate opportunity to prepare for final examinations, no tests may be given in courses of 3 credit hours or more within seven days before the beginning of the examination period.

Exceptions to these policies require the written approval of the dean of the college in which the course is offered.

## Absence from Class

All students are expected to attend every one of their classes unless their absence has been approved by the instructor concerned or the appropriate dean. Absence from class is primarily a matter between the student and the instructor of the class. It is the students' responsibility to discuss with their instructors the reason for their absence and to learn what makeup work may be required.

## Withdrawal from the University

A student who wishes to withdraw from the University for the remainder of a semester or session must apply to the dean of students for a permit to withdraw by the deadline (see page 5). Upon return of the properly signed permit to the Office of the Registrar, the return of such fees as are refundable will be in accordance to the published refund schedule (see page 424). If students withdraw after the seventh week of the semester, they are ordinarily not granted readmission for the following semester, unless extreme contributory circumstances such as severe illness caused the withdrawal.

The term "honorable dismissal" refers to conduct and character only, not to class standing and grades. It is not granted unless the students' conduct and character are such as would entitle them to continue in the University.

A student who stops attending the University without completing the appropriate paperwork is not entitled to refunds of any kind, and the instructor of each course in which the student is enrolled is required to report a final grade of $F$ to the Office of the Registrar. For the Law School, consult that School's bulletin.

## Graduation

## Responsibility of the Student

Every candidate for a degree is personally responsible for meeting all requirements for graduation. No University official or advisor can relieve the student of this responsibility.

Students in an undergraduate program of the University may fulfill the requirements for graduation under any catalog issued during their years of attendance, beginning with the year they first entered the University, provided there is no absence of five or more years between periods of attendance. (For the Law School, consult that School's bulletin.) All requirements in one catalog issue must be met. Students must resolve all Incomplete and NR grades prior to graduation. NR (No Report) grades are used as a temporary grade on transcripts if the final grade has not been reported to the Office of the Registrar.

Valparaiso University has three graduation periods per academic year: May, August, and December. These graduation periods begin on the last day of each academic term and continue for 30 days. Any student with unmet requirements at the close of the graduation period must defer to the next graduation period, regardless of the circumstances. In order to graduate, students must complete the Graduation Application, available through DataVU, for each degree or certificate separately by the deadlines published in the University Calendar.

Students who return to the University after an absence of five or more years may no longer be a candidate for a degree on the basis of the catalog requirements covered by their previous years of attendance, but must fulfill for graduation all the requirements and provisions beginning with the catalog of the year in which they reenter the University. In addition, credits earned at Valparaiso University more than fifteen years before reentry are subject to reevaluation and shall not be accepted toward graduation requirements unless approved by the appropriate Faculty Senate standing committee.

After a student has been awarded a degree from Valparaiso University, that degree cannot be altered. Students may not take courses after graduation for the purpose of adding a major, adding a minor, or changing a GPA. Students cannot add a major or minor after graduation, even if their previous coursework corresponds to an additional credential/major/minor/certificate within their catalog. Degrees, diplomas, and transcripts are withheld for a students whose account with the University has not been settled in full.

## Second Degrees

In order to receive a second degree, a student must earn at least thirty semester credits and sixty quality points in excess of the total number of semester credits required for the first degree and, in addition, the student must fulfill all the specific course requirements for the second degree. No course used to fulfill a major or minor requirement for one degree may be used to fulfill any major or minor requirement for a second degree. This restriction refers to courses within the major or minor field, not to additional courses required from outside of the major or minor field. A student who selects an individualized major or minor for any degree may not use the designated courses to fulfill any other graduation requirement.

Each degree must contain all of the components necessary for each to be a complete program, including those described in the major field requirements (see page 46). Approval of applications for dual degrees must be given by the appropriate advisors and deans. No student may graduate at one commencement with more than one degree of the same notation.

Students in the Graduate School should refer to that division's bulletin for specific information.

## Credit and Quality Point Requirements

Candidates for graduation with an associate's degree or a bachelor's degree must have a grade point average of 2.000 or more in all their work at Valparaiso University. In addition, candidates for a bachelor's degree must have a grade point average of 2.000 or more in all majors, minors, or interdisciplinary programs, based on their work at Valparaiso University. Candidates for the Associate in Science degree must have a grade point average of 2.000 in all of their science courses at Valparaiso University. Candidates for the Associate of Arts degree must have a grade point average of 2.000 in their concentration area. In the computation of the students' standings, grades of D+, D, D-, and F are included. Grades of S, U, and W are not included.

Candidates for a master's degree or the Juris Doctor degree should consult the appropriate bulletin for the corresponding requirement.

## Residence Requirements

Regardless of other degree requirements, candidates for all bachelor's degrees must meet the following requirements in residence at Valparaiso University:

1. At least one-half the number of credit hours required for all majors, minors, or interdisciplinary programs (a minimum of 15 credit hours in the area of foreign languages)
2. At least three credits in theology
3. At least thirty of the last forty credits presented for the degree

Residence requirements for master's degrees and the Juris Doctor degree may be found in the appropriate bulletins.
Ordinarily, credit is not given for courses taken concurrently at other approved schools or for correspondence courses taken during a student's enrollment at this University. Any exception to this policy must have the approval of the student's academic advisor, the dean of the appropriate college, and the Committee on Academic and Professional Standards. Note that credit for courses taken under one of the international study semesters or special semester programs described beginning on pages 5 and 19 apply as taken in residence at this University.

Residence requirements for the undergraduate baccalaureate degrees awarded by the College of Business can be found on page 295.

## Application for a Degree

Students initiate the commencement process by discussing their plan of study with their advisor and completing a Graduation Application online through DataVU. A student who wishes to receive a degree at the end of a Fall Semester must formally apply no later than the preceding April 1st. A student who wishes to receive a degree at the end of a Spring Semester or a Summer Session must formally apply no later than the preceding October 1st.

Once this application has been processed, the students' degrees will be audited by the Office of the Registrar, and students will be notified of any requirements they have yet to fulfill. Each student will be placed on a mailing list to receive all communications regarding commencement and Grad Finale, an event at which candidates can complete tasks in preparation for graduation related to their cap and gown, verifying their diploma details, and gathering important information from several departments. Being on the mailing list will also allow the student to receive tickets for guests to attend commencement.

Candidates for degrees in August or December, who expect to complete requirements in absentia, must be sure that all course work is completed by the deadline date set for candidates who are registered on campus. Official transcripts for transfer work must be on file in the Office of the Registrar no later than ten days after the close of a semester or session. Further information will be furnished upon request from those candidates completing degree requirements in absentia.

## Commencement Ceremonies

All students are strongly encouraged to participate in the commencement ceremony. The University conducts two commencement ceremonies annually. The May ceremony is conducted in the Athletics-Recreation Center and includes those candidates completing their requirements in either a Spring Semester or a Summer Session. Students who complete their work toward a degree at the end of a Summer Session will be granted the degree at the end of the final Summer Session. The December ceremony is conducted in the Chapel of the Resurrection and usually takes place before the Fall Semester is over.

## Bachelor's Degrees with Honors

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a grade point average of 3.80 in their work at this institution will be graduated Summa Cum Laude.

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a grade point average of 3.60 in their work at this institution will be graduated Magna Cum Laude.

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a grade point average of 3.40 in their work at this institution will be graduated Cum Laude.

See the bulletin of the Law School for the Juris Doctor degree with honors.
Please note that Academic Honors for the purposes of the Commencement program are estimated based on the student's cumulative GPA at the end of the semester prior to the term in which they are anticipated to graduate. Actual Academic Honors as posted on a transcript or diploma may differ based on all completed work.

## Semester Honors

An undergraduate student (freshman through senior) who achieves a grade point average of 3.500 in any semester will be awarded honors under the following restrictions:

1. The student received no grades of $I$ or $U$ at the official end of the semester concerned
2. The student completed at least fourteen credit hours of work for that semester on campus or at least twelve credit hours in an international studies semester, special off-campus semester, or any other approved cooperating program (pages 12-14 and 19-30)

Semester Honors are also referred to as the dean's list. Posting and granting of semester honors are at the discretion of each college within the University. Questions should be referred to the dean's office of the appropriate college.

## Transcripts of Academic Records

The Family Educational Rights and Privacy Act of 1974 (Buckley Amendment) provides, in part, that the institution will maintain the confidentiality of student academic records. No one outside the University shall have access to, nor will the University disclose any information from, student academic records without the written consent of students, except to persons, organizations, or agencies which are permitted to receive such information under the act. Please visit the Office of General Counsel online (www.valpo.edu/general-counsel/policies/academic-and-student-life-policies/) for more information.

Official transcripts of academic records are released only after an online request has been made. Diplomas and transcripts are withheld for students whose account with the University has not been settled in full. The University's transcript policy may be found online at www.valpo.edu/registrar/transcript-verification/transcript.

The table below outlines the cost of transcript services through Valparaiso University's approved transcript vendor. Other ordering options, including expedited shipping, are available in the ordering system. All orders are placed through DataVU.

| $\$ 3.00$ | Official transcript delivered electronically |
| :--- | :--- |
| $\$ 5.00$ | Official transcript on paper delivered via USPS first class mail <br> Expedited shipping of paper transcripts is available for an additional fee. |
| $\$ 30.00$ | Official transcript on paper picked up on campus in the Office of the Registrar |

## Tuition and Fees

Learn more about Tuition and Fees online.

The following information pertains to undergraduate programs. Full- and part-time rates for the Law School are published in the Law Catalog. Full- and part-time rates for graduate programs are published in the Graduate Catalog. Tuition charges for special programs for registered nurses sponsored by the College of Nursing and Health Professions may be obtained by contacting the dean of the college or the Office of Admission.

## Undergraduate Tuition and Fees, Full-Time Students

The academic year is comprised of two semesters (fall and spring), and summer sessions. Tuition and fee charges are based on the number of credit hours and the college in which the student is enrolled. Undergraduate students enrolled in 12 or more credit hours are classified as full-time students. Full-time tuition and general fee rates for the fall and spring semester are as follows:

| Undergraduate Tuition, Full-Time |  |
| :--- | :--- |
| Full Time (12-19 credit hours) | $\$ 18,775$ per semester |
| Above $\mathbf{1 9}$ credit hours | $\$ 1,565$ per credit hour |

Undergraduate General Fee, Full-Time
12 or more credit hours $\quad \$ 605$ per semester

The general fee is used to defray the costs of Student Senate, co-curricular activities, the Fitness Center, health services, and technology.

## Undergraduate Tuition and Fees, Part-Time Students

Undergraduate students enrolled in fewer than 12 credit hours are classified as part-time students. Part-time tuition and general fee rates for the fall and spring semester are as follows:

| Undergraduate Tuition, Part-Time |  |
| :--- | :--- |
| Enrolled in fewer than $\mathbf{1 2}$ credit hours | $\$ 1,665$ per credit hour |
| Enrolled in College of Adult Scholars (no credit hour requirement) | $\$ 510$ per credit hour |
| Part-time students who audit a course pay \$1,615 per credit hour for that course. |  |
| Undergraduate General Fee, Part-Time |  |
| Enrolled in fewer than $\mathbf{1 2}$ credit hours | $\$ 116$ per semester |

The part-time general fee excludes the use of the Fitness Center and health services.

## Room and Board Rates

All rates given are per semester; the academic year is comprised of two semesters.

| Room Rates |  |
| :--- | :--- |
| Alumni, Lankenau, and Scheele | $\$ 4,950$ per semester |
| Single | $\$ 3,500$ per semester |
| Double | $\$ 5,100$ per semester |
| Brandt | $\$ 3,650$ per semester |
| Single | $\$ 5,570$ per semester |
| Double | $\$ 3,910$ per semester |
| Wehrenberg, Guild, and Memorial |  |
| Single | $\$ 5,570$ per semester |
| Double/Triple/Quad | $\$ 3,910$ per semester |
| Kade-Duesenberg |  |
| $\quad$ Single | $\$ 5,450$ per semester |
| Double | $\$ 4,700$ per semester |
| Beacon | $\$ 5,300$ per semester |
| Single | $\$ 4.980$ per semester |
| Double | $\$ 3,500$ per semester |
| Uptown East Apartments | $\$ 4,700$ per semester |
| Promenade Apartments |  |
| 807 Mound Street |  |
| Sorority Housing |  |

## Meal Plans

All students living in residence halls, other than sorority members living in Sorority Housing who have completed less than six semesters of study, are assigned a mandatory a la carte meal plan as part of their housing agreement.

| Mandatory Buy-in Rates |  |
| :--- | :--- |
| Mandatory Freshman | $\$ 2,200$ per semester |
| Mandatory Sophomore | $\$ 2,000$ per semester |
| Mandatory Junior | $\$ 1,900$ per semester |

See "Dining Locations" on page 422 for additional meal plan information.

## Other Fees

## Orientation-\$155 (June/August), \$50 (January)

This fee is required of all new students, both resident and commuter. It is not refundable.

## Tuition Deposit-\$200

This fee is required of all new students, both resident and commuter. This deposit will be refunded if written notice of cancellation is received by March 1 for the summer terms, May 1 for the Fall Semester, or November 1 for Spring semester. For the Law School, see the appropriate bulletin.

## Department of Education Fee for Criminal Background Check (cost varies)

All students must also undergo an annual criminal background check using the department's designated online background check service. The fee for this service is paid directly by students with a credit card to this service company.

## Performance Music Fees-\$400/\$185

The University encourages students to continue performance music instruction by charging modest fees for private and class lessons. Students pay a fee of $\$ 400$ per semester, per course, for instruction in private lessons. Students enrolled in functional piano lessons pay a fee of $\$ 185$ per semester, per course. There is no additional charge for use of an instrument or practice room. Performance music fees are not refundable after the tenth class day of a semester.

## Engineering Laboratory Fee-\$370 per semester

The engineering laboratory fee is assigned to all students enrolled in the College of Engineering, pre-engineering students enrolled in engineering courses, and non-engineering students enrolled in GE 100 or that have received the approval of the dean of Engineering to enroll in more than one engineering course. Engineering students on a co-op semester or study abroad semester that are not enrolled in any other engineering course will not be charged the Engineering Laboratory Fee for that semester. Exceptions to this fee may be granted by the vice president for Administration and Finance or the dean of Engineering.

## Undergraduate Cooperative Education Programs-\$510 per credit hour

## Nursing Liability Insurance-\$24 (Family Nurse Practitioner-\$88)

In connection with the clinical practice component of the nursing program, all students in the Nursing program, beginning with the sophomore year, must secure and provide proof of professional and personal liability insurance.

## Nursing Lab Fee-\$125 (DNP-\$150)

This fee is payable by each nursing student entering sophomore nursing classes. Accelerated summer students taking NUR 203 are billed at the beginning of summer, fall, and at the beginning of their second summer.

## Nursing Testing Fee-\$850

This fee is payable by each nursing student entering the sophomore year.

## Comprehensive Social Work Fee- $\mathbf{\$ 3 5 0}$ (juniors and seniors), $\mathbf{\$ 9 0}$ (sophomores/first-year students)

This annual fee is required of social work majors. It covers field fees as well as the costs of multiple expected events. This fee is billed at the beginning of the fall semester.

## Study Abroad, Cambridge, England- \$1,500

Each participant pays this fee.
Study Abroad, Reutlingen, Germany-\$1,500
Each participant pays this fee.
Study Abroad, San José, Costa Rica-\$1,500
Each participant pays this fee.

## Study Abroad, Hangzhou, China-\$1,500

Each participant pays this fee.

## Transcript-\$3-5 per official transcript

There is a $\$ 3.00$ fee for each official electronic transcript and $\$ 5.00$ fee for each official paper transcript ordered online through Valparaiso University's approved transcript vendor. A pickup option is available for an additional fee ( $\$ 30$ ). Express mail options are also available for an additional fee. No transcript of a student's record is released until the student has met in full all obligations, financial or otherwise, to the University.

## Returned Check Fees-\$30

A $\$ 30$ fee will be charged for each check returned by the bank due to insufficient funds, closed accounts, etc. This applies to checks submitted directly to Valparaiso University offices. Checks submitted to the University through Tuition Management Systems (TMS) are subject to TMS returned check fees and policies.

## Vehicle Registration

All vehicles (including motorcycles and mopeds) parking on Valparaiso University property must be registered with the Parking and Transportation office and must display a valid registration permit. Students may only park in designated parking lots corresponding to the colored permit affixed to their vehicle. Valparaiso University has three types of parking lots for student use: Long Term, Resident, and Commuter. All permits (except Red Permits) will have access to Long Term parking lots (Green), in addition to the specific lots as granted by the permit. Resident parking is granted by either a Red or Blue Permit and Commuter parking is granted by an Orange Permit. Additional details including regulations, fines, and maps are available at: www.valpo.edu/aux/parking.

## Freshmen

Freshmen residential students are not permitted to park on campus without an approved waiver (available on the parking website) and a completed permit application. Once approved, Freshmen may purchase a Red Permit. A Red Permit is $\$ 180$ per semester, or $\$ 300$ per academic year. The Red Permit does not include the Long Term lots (Green).

## Non-Freshmen

Residential Sophomores, Juniors, Seniors, and Graduate students may purchase either a Green or Blue Permit. A Green permit is $\$ 80$ per semester, or $\$ 135$ per academic year. A Blue Permit is $\$ 120$ per semester, or $\$ 200$ per academic year.

## Commuter Students

Commuter students may purchase a Green Permit, or an Orange Permit. A Green permit is $\$ 80$ per semester, or $\$ 135$ per academic year. An Orange Permit is $\$ 120$ per semester, or $\$ 200$ per academic year.

## Permit Replacement Fee-\$15

This fee will be charged for a replacement Registration Permit.

## Payment Terms

## Amounts due the University are payable in full one week before the beginning of each semester.

Before the beginning of each semester, students will receive a Student Account Center advanced billing notice via email to their University email address. Payment instructions are available in TMS. The advanced billing statement will include estimated charges, financial aid and balance due for the coming semester. The student will need to adjust the balance due for pending charges anticipated for special course fees and for outside scholarships not appearing on the advanced billing statement. Amounts to be earned through campus employment will not be deducted, as these are paid directly to the student through the University's payroll system. Payment for the adjusted balance due must be made by August $\mathbf{1 5}$ for fall charges and December 31 for spring charges unless the student has enrolled in a tuition payment plan (see "Educational Expense Payment Plan" below).

Each student registering at Valparaiso University assumes responsibility to pay all University-related expenses not covered by financial aid. Students who do not have sufficient financial aid, are not already enrolled in a monthly payment plan, and have not paid their initial semester charges (tuition, general fee, room and board) by the semester due date will automatically be charged a $\$ 100$ late payment fee. An account restriction will also be placed on the students' accounts that will suspend student services.

Students who withdraw from the University must make arrangements to meet all outstanding financial obligations to the University. Examples of such obligations are tuition and fees, room and board, library fines, health fees, parking violations, etc. The student's transcript is not released until payment of all obligations has been made.

Each graduating student must pay any remaining financial obligations to the University before graduation. No degree is conferred upon and no transcript is given for a student whose account with the University has not been settled in full.

Loans such as the Federal Perkins Program or Valparaiso University Student Loans become due as stated in the promissory note signed by the student. Transcripts are not released to students who are in arrears on these loans.

## Delinquent Accounts

Each student registering at Valparaiso University assumes responsibility to pay all University-related expenses not covered by financial aid. Students who have not secured sufficient financial aid, who have a delinquent or insufficient monthly payment plan, and/or have not paid posted account charges after 30 days will be considered delinquent.

If a satisfactory plan is not arranged, or if payments are not made in accordance with the payment plan and due dates, the entire balance shall be immediately due and payable, and the University has the right to take steps to collect the balance, including, but not limited to, the following:

- excluding the student from classes and other campus services;
- withholding course grades, academic transcripts, and diploma until the balance is paid;
- turning the student's account over to a collection agency; or
- taking legal action to collect the balance due.

The student authorizes the University to release financial information about his/her account and other information useful in verifying the charges on the account to those concerned with collecting the balance due. In the event of collection efforts, procedures, or a suit to collect unpaid balances on the student's account and/or institutional loans, the student agrees to be charged and pay all of the University's fees for collections, including legal fees, not to exceed $50 \%$ of the entire outstanding balance. Delinquent accounts may be reported to credit bureaus and bear interest at $6 \%$ per annum.

## Educational Expense Payment Plan

Valparaiso University partners with a third party provider to offer a deferred payment plan for the convenience of those students and parents who may wish to spread payment over the semester. Under the plan, monthly payments may be arranged for the payment of tuition, fees, room and board. The payment plan provider offers a plan for each semester. The enrollment fee is $\$ 30$ for the semester plan.

The semester plan is mandatory for those students who do not have sufficient financial aid or other resources and have not met the semester payment due date. There is a $\$ 30$ enrollment fee for the payment plan. Payment plan accounts with delinquent or past due payments will receive a $\$ 100$ late payment fee charged to the student's account.

A link to an explanation of the plan will be included with the fall and spring advanced billing statement notices that are emailed to the student's University email address prior to the start of each term.

## Housing Regulations

The University requires first-year students, sophomores, and juniors to live in residence halls. Class standing is determined by student classification policy, page 412. Exceptions are made for veterans, those who will be 22 before September 1 of the academic year in question, those living with parents, spouse, or legal guardian (commuter students), and sophomore and junior fraternity men who live in recognized fraternity houses. All sophomore and junior students who return from their fall semester of international studies or other cooperative off-campus programs are required to live in University operated residence halls during the spring semester.

Senior, graduate, and law students may apply to live in University residence halls, however, first priority is given to undergraduate students.

The Office of Residential Life also maintains a listing of rooms in private homes, apartments and homes for sale or rent. Students desiring such accommodations should plan to visit the campus at least six weeks before the semester of enrollment to inspect the available listings and make arrangements with the individual landlords. Every landlord whose property is listed has signed a nondiscrimination statement. The University is not involved in arrangements between students and landlords, except in the event of racial discrimination. The University provides a listing service only and does not inspect, approve, recommend, or authorize any off-campus living units.

## Commuter Students

Although students are normally required to live in University residence halls, an exception is made for commuter students. A commuter student is defined as a full-time, undergraduate student who lives with his/her parent or legal guardian, at their primary residence. This address must be within the shorter of 50 miles or one hour from campus. Students who otherwise would be required to live on campus may not reside at another off-campus address after registering as a commuter student. Questions related to this policy should be directed to the Office of Residential Life.

## Application

An application form for University housing is mailed to each new student with the New Student Enrollment Agreement. This application and the $\$ 200.00$ deposit (tuition and housing) should be returned to the Office of Admissions as soon as possible. All checks should be made payable to Valparaiso University. A student who occupies a room in a University residence hall will have $\$ 100.00$ of the deposit go towards their housing deposit and the remaining $\$ 100.00$ toward tuition and fees.

All returning students who are required to live in University residence halls according to University housing regulations must complete an Upper-class Housing Agreement form. If an upper-class student does not currently have a $\$ 100.00$ Housing Deposit on file, he/she is required to make a deposit at the Finance Office in accordance with application guidelines established by the Office of Residential Life.

## Assignment Policy

New freshman and transfer student assignments are made by the Office of Residential Life in the order in which their New Student Enrollment Agreements and deposits are received according to space availability.

Returning upper class student assignments are made according to the guidelines established by the Office of Residential Life. Assignments are made with the goal of establishing and developing positive residence hall communities. All upper class housing agreements received before the deadline indicated by the Office of Residential Life will be given equal consideration as outlined in the instructions for the assignment process.

The University will endeavor, but cannot guarantee, to assign accommodations according to the preferences indicated by the student.

Any request for a change in residence hall assignment must be submitted in writing and approved by the Office of Residential Life.

The University reserves the right to make changes in residence hall assignments if necessary for the most effective accommodation of the student body.

## Refunds-New Students

The Housing Deposit is refunded in full if a written notice of cancellation is received by the Admissions Office on or before May 1 for the fall semester, or on or before November 1 for the spring semester. No refund will be given if enrollment cancellation notice is given after these respective dates.

## Refunds-Returning Students

Deposits are refunded minus any other indebtedness to the University according to the following guidelines. The full deposit is refunded if written notice is given to the Office of Residential Life on or before the application deadline for fall semester, and November 15 for spring semester. One-half of the housing deposit is refunded if written notice of cancellation is received by the Office of Residential Life on or before June 1 for the fall semester, or on or before December 1 for the spring semester. No refund is given if cancellation is given after June 1 for fall semester and December 1 for spring semester. The Housing Agreement may not be cancelled after July 1 for fall semester and December 31 for spring semester by students not required to live in University housing.

If a student is denied readmission or if the University should be unable to provide housing, the full amount of the deposit will be refunded.

## Occupancy

The housing agreement is binding for the full academic year. Students who are assigned residence hall housing are permitted to move out of the residence hall only if they withdraw from the University, graduate, or participate in off-campus study programs such as international study, Washington Semester, urban studies, and the like.

## Vacation Periods

The residence halls close at 12:00 noon on the day following the last day of classes or final exams prior to the Thanksgiving, semester, and spring breaks. The halls reopen at 12:00 noon on the day prior to resumption of classes following the Thanksgiving and spring breaks, and at 12:00 noon on the day prior to official spring semester registration and orientation activities following the semester break. Residence Hall accommodations are available during vacation periods for international students and other residents who meet certain criteria. Contact the Office of Residential Life for more information.

## Roommate

Preferences should be listed on the housing application. All roommate requests must be mutually indicated by both students. New students are notified in July of their roommate assignments.

Arrival at the residence hall for new students and new transfer students should coincide with the first day of orientation activities. All students are expected to report immediately to their assigned residence halls when they arrive on campus.

## Furnishings

All rooms in the University residence halls are provided with the necessary basic furniture. Occupants supply their own bedding, pillows, towels, lamps and floor coverings if desired. Washers and dryers are also provided within each residence hall. Draperies are provided. Further information is available from the Office of Residential Life.

University residence halls are staffed by full-time professional residential learning coordinators, undergraduate paraprofessional assistant coordinators, and resident assistants.

All students residing in University owned residence halls are financially responsible for damage to rooms, furnishings, and equipment. Residence Hall staff members report such damage to the Finance Office and the student or the parent is billed for the cost of repair or replacement.

## Dining Locations and Dining Plans

## Dining Locations

The primary venues for undergraduate dining are located in the Harre Union which features two dining locations, the Founders Table and the Campus Café. In addition, Grinders coffee shop is located in the Christopher Center.

Founders Table is located on the east side of the Harre Union and is open for breakfast, lunch, and dinner Monday through Friday, as well as for brunch and dinner on Saturday and Sunday. Founders Table features a wide variety of offerings, which include four display cooking stations that offer ethnic, vegetarian, and home-style favorites: The Chef's Corner features creative dishes with whole meal options; The Grill offers many all-time favorites such as chicken tenders, fries, burgers, and more; Sizzle provides unique choices such as stir-fry, pasta, and panini sandwiches; and the Brick Oven features pizza and specialty subs baked in a Wood Stone oven. In addition, Nuevo is a Mexican concept area offering burritos, tacos, and more; and Baby Blues BBQ offers all your favorite down home BBQ. Offerings include pulled pork, ribs, beef brisket, and chicken with sides of baked beans, greens, mac and cheese, and more. The salad bar offers a variety of healthy items from which to choose, and the deli includes all the fixings to create your favorite sandwiches. Homemade soups are available daily and, for those in a hurry, the Grab and Go area provides a variety of items including desserts, sandwiches, wraps, sushi, salads, and fresh fruit.

The Campus Café is located near the book store in the Harre Union and is open for lunch, dinner, and late night snacks, along with a wide selection of groceries and convenience items. The Campus Café offers Grab and Go readymade selections, Perks Coffee
shop featuring specialty coffee drinks from Starbucks, and Freshens frozen yogurt, salads, crepes, rice bowls, and smoothies. The Pizzazz area offers selections such as pizza, grilled items, and appetizers.

Grinders coffee shop is located on the lower level of the Christopher Center for Library and Information Resources. Grinders is open late most evenings and serves a wide variety of specialty coffee drinks from Starbucks, a deli sandwich bar, and a variety of grab and go items, including pastries, salads, and wraps.

## Dining Plans

Dining Plans are all à la carte, which means all items are purchased on a declining balance and are priced on an individual basis. Students begin each semester with a set amount of dollars for purchasing à la carte items and are not limited to a fixed number of meals. À la carte plans provide flexibility when making meal purchases, as students only pay for what they choose to eat, when they choose to eat. All students living in residence halls, who are freshman, sophomore, or junior classification, other than sorority members living in Scheele Hall, are required to purchase the Dining Plan associated with the student's classification. Students are required to purchase a meal plan until they have reached senior classification.

The mandatory rates for 2016-2017 are: \$2,130 per semester for freshmen; \$1,930 per semester for sophomores; and \$1,830 per semester for juniors. The dollars remaining, after the reduction of a $\$ 100$ administrative fee, may be used to make purchases in the University's dining facilities. Student ID cards have the Dining Plan encoded and are used for purchases at University dining locations.

All Dining Plans require two semesters of buy-in. Unused balances will be rolled over from the fall semester only and added to the spring semester buy-in as long as the student has purchased a plan for the spring semester. The rollover amount is automatically added to the student's account. If a student does not sign up for a spring plan, then they forfeit the remaining dollars. Unused balances at the end of the spring semester are not refunded or carried over. Dining plans are non-refundable.

If a student has special dietary needs such as medical restrictions or vegetarian/vegan diets, they can be accommodated by contacting the Dining Services online at valpo.edu/dining, by email at dining@valpo.edu, or in the dining office located in the Harre Union, room 170.

## Refund Policy

## Withdrawal From All Classes

If, for whatever reason, a student needs to who withdraw from Valparaiso University, they may be eligible for a prorated refund of their tuition and room charges according to the following schedule:

| During the add/drop period | $100 \%$ |
| :--- | ---: |
| During the second week of classes | $90 \%$ |
| During the third week of classes | $80 \%$ |
| During the fourth week of classes | $70 \%$ |
| During the fifth week of classes | $60 \%$ |
| During the sixth week of classes | $50 \%$ |
| During the seventh week of classes | $40 \%$ |
| During the eighth week of classes | $30 \%$ |
| During the ninth week of classes | $20 \%$ |
| During the tenth week of classes | $10 \%$ |
| After tenth week of classes | None |

The unused meal plan credit is refundable throughout the semester. The refund amount equals the balance of the unused contract less a ten percent administrative fee.

There will be no refund of general, special, and laboratory fees.
The date of withdrawal and basis for calculating all refunds will be the date on which the student notifies the Office of Student Affairs of their intent to withdraw from the University, provided the withdrawal form is completed and submitted to the Office of the Registrar no later than the end of the next working day. Each semester, a schedule of the applicable refund dates is available in the Finance Office, the Financial Aid Office, and the Office of the Registrar

## Adjustment of Financial Aid Due to Complete Withdrawal

The University and/or the student may be required to return some of the federal financial aid, if any, awarded to the student. If the student received financial aid from state, University, or private funds (other than family), a portion of the refund may also be returned to the grant, scholarship, or loan source from which it was received. The above refund schedule will be used to adjust institutional aid. The federal "Return of Title IV Funds" formula dictates the amount of Federal Title IV aid, other than Federal Work Study, that must be returned to the federal government by the school and the student. For students receiving Indiana State grants, if full time status is not maintained through the end of the fourth week of the semester, the University must return 100\% of those funds to the state.

Federal "Return of Title IV Funds" Formula: If a student withdraws on or before the 60\% point of the semester, the percentage of funds that must be returned to the federal government is equal to the number of calendar days remaining in the semester, divided by the number of calendar days in the semester. Scheduled breaks of more than four consecutive days are excluded. The calculation of the return of these funds may result in the student owing a balance to the University and/or the federal government.

Note: If funds are released to a student because of a credit balance on the student's account, then the student may be required to repay some of the federal grants if the student withdraws.

Students considering withdrawing from all classes should consult with the staff in the Student Accounts and/or Financial Aid Offices if they are concerned about the financial impact of withdrawing.

## Dropping Courses

Tuition charges will be reassessed at the end of the add/drop period. There will be no adjustments to tuition for courses dropped after the add/drop period. There will also be no refund of the special, laboratory, or general fees.

The financial aid award, if any, will be reviewed at the end of the add/drop period and, if needed will be adjusted to reflect enrollment at that time.

## Unofficial Withdrawals

If a student does not successfully complete any courses during a given semester, their federal aid may need to be adjusted. If the University cannot document that a student attended at least one course past the $60 \%$ point of the semester, federal aid will be adjusted according to the "Return of Title IV Funds" policy above. The date used in that calculation will be the mid-point of the given semester unless a later date can be documented.

## Financial Aid

Visit the Office of Financial Aid online.

The Office of Financial Aid at Valparaiso University is committed to providing resources necessary to help students complete their education. As such, we place primary emphasis on the student's academic achievement and financial need. Financial aid consists of scholarships, grants, loans, and campus employment, which may be offered to a student singly or in various combinations. The family of a student is expected to make a maximum effort to assist with college expenses. For more information about financial aid programs, contact the Office of Financial Aid.

## Method of Application

The following procedure should be followed by any student entering the University for the first time who wishes to apply for financial aid:

1. File an Application for Admission with the Office of Admission. No student will be considered for assistance until they are admitted to the University.
2. Submit the Free Application for Federal Student Aid (FAFSA). The FAFSA requires no fee and can be completed online at www.fafsa.ed.gov. All students should file the FAFSA before March 1 for priority consideration. (For Indiana residents, the FAFSA must be received by the federal processor by March 10 to be eligible for Indiana awards.) The filing of the FAFSA may be completed after October 1.

## Renewal

All need-based financial assistance requires the annual filing of the Free Application for Federal Student Aid (FAFSA). Students should file by March 1 for priority consideration. Renewal depends on continued need, the availability of funds, and eligibility as described below, including meeting the requirements for satisfactory academic progress. The policy can be found on page 429.

## Financial Aid Programs

Financial aid awards may include gift aid (grants and scholarships) and/or self-help (loans and employment).

## Financial Aid Eligibility

To be eligible for most federal, state, and Valparaiso University assistance, undergraduate students must be enrolled full-time (some federal and state assistance is available to part-time students) in a degree or certificate program with at least twelve credits per semester; maintain satisfactory academic progress; demonstrate financial need as determined by filing the FAFSA; be a U.S. citizen or an eligible noncitizen; not be in default on a federal loan or owe a refund or repayment on any federal or state program.

Graduate students also must meet the above requirements. However, they must be enrolled in a degree program with at least four and one half credits per semester.

Initial financial aid awards are based on the assumption that the recipient will be enrolled as a full-time student. Students who enroll for less than full time or who withdraw during a semester could have their financial aid award reduced or canceled. Enrollment status is determined at the beginning of each semester. For federal aid, enrollment status is determined when the aid is disbursed.

## Scholarships and Special Awards

Valparaiso University makes available to new students a variety of scholarships and awards based on academic and other qualifications. Eligibility for all scholarships and awards is determined by the University Scholarship Committee whose decision is final. Scholarships and awards are offered in good faith by the University with the intent they will be renewed under the conditions specified. Specific renewal requirements for scholarships and awards are stated in the scholarship award letter sent to each recipient upon admission. Annual scholarships awarded for four years are to be evenly divided each year between fall and spring semesters. If a student recipient graduates after only seven semesters of enrollment, the eighth semester of the scholarship is no longer available. Some exceptions are possible for students who enroll in summer terms with the express purpose of graduating early. Students should contact the Financial Aid Office as soon as they begin to consider graduating in less than four years to review how their financial aid awards will be affected. If an award is not renewed because the cumulative grade point average falls below the standard, the award may be restored if the student's cumulative grade point average meets the standard at a later time. The student should contact the Financial Aid Office to request restoration of the award.

The University does reserve the right to alter any scholarship or award should circumstances dictate. Some scholarships and awards may not be offered in combination with each other. Please refer to our website at http://www.valpo.edu/student-financialservices/planning for a list of scholarships and for more information.

## Need-Based Aid Grant Programs

Valpo Fund Alumni Awards are institutional awards that are not repaid. All students who file the FAFSA will be considered. These scholarships are funded, in large part, by the endowed and donated scholarships listed on page 432.

Federal Pell Grants are available to all students who have demonstrated financial need according to a federal formula. The FAFSA is required. Award amounts vary based on federal guidelines; may be enrolled full-time or part-time.

Federal Supplemental Educational Opportunity Grants (SEOG) are federal grants, awarded to Valparaiso University students with the greatest financial need with first preference to Federal Pell Grant recipients. Although by regulation the awards can range from $\$ 200$ to $\$ 4,000$, the actual awards determined by Valparaiso University are dependent upon the amount of funding provided by the federal government and the number of Pell Grant recipients. Recipients may be enrolled either full-time or part-time.

State Grants (Freedom of Choice Award and 21st Century Award) are for eligible Indiana residents and may be used at Valparaiso University. Non-Indiana residents should contact their state agencies for information and application procedures for any state grants for which they may be eligible. The FAFSA must be received by the federal processor by March 10 to be eligible for Indiana Awards. Awards are based on need, and are determined annually by state formula. Students must be enrolled full-time for the standard grant programs.

## Loan Programs

Need-based student loans feature subsidized interest and deferred payments. Students must be enrolled at least half-time. Repayment of these loans does not begin until six to nine months after graduation or after dropping below half-time status. Payments may be deferred for attending graduate school or for a variety of special circumstances. Repayments usually extend over a period of ten years although extended terms and income-based plans are also offered. There is no penalty in student loan programs for prepaying interest and principal. Many Valparaiso University students receive loans as part of their financial aid packages.

In addition to the loans listed below, there are other private lenders who specialize in educational loans that are not based upon financial need.

The following federal need-based educational loans are available through Valparaiso University. To be eligible, you must complete and submit the FAFSA. Valparaiso University notifies the student of eligibility via an Award Notification.

## Federal Perkins Loans

Students enrolled full-time who have exceptional need. Limited monies come from the federal government and are administered by Valparaiso University. Repayment begins nine (9) months after the student is no longer enrolled at least half-time. Entrance and exit counseling is required. Complete and submit the FAFSA before March 1st. The Federal Perkins Loan program will end on September 30, 2017. No new loans may be awarded or disbursed after that date.

## Federal Direct Subsidized Student Loans

Undergraduate students enrolled at least half-time who demonstrate financial need. Monies come from the federal government. The federal government pays interest while the borrower is in school. Repayment begins six (6) months after the borrower is no longer enrolled in college at least half-time. Students should complete and submit the FAFSA to apply, and all firsttime borrowers must complete entrance counseling and sign a promissory note online at studentloans.gov.

## Federal Direct Unsubsidized Loans

These loans are available to students who are enrolled at least half-time and who are not eligible for or were partially eligible for the Federal Direct Subsidized Loan. Terms and limits are the same as Federal Direct Subsidized Loans, except the student is charged interest on the loan from the date funds are disbursed.

## Federal Direct Loan Limits

- Freshmen = \$5,500 (\$3,500 max in a subsidized loan)
- Sophomore = \$6,500 (\$4,500 max in a subsidized loan)
- Junior $=\$ 7,500$ ( $\$ 5,500$ max in a subsidized loan)
- Senior $=\$ 7,500$ ( $\$ 5,500$ max in a subsidized loan)

For independent undergraduates, the loan limits are higher than the Federal Direct Loan maximums. Freshmen/sophomore independent students may receive up to $\$ 6,000$ in additional unsubsidized loans and juniors/seniors up to $\$ 7,000$ more per academic year.

## Federal Direct Parent Loans for Undergraduate Students (PLUS)

These loans are for parents of dependent students enrolled in at least six semester hours. Monies come from the federal government. This loan is not based on financial need, but a credit check is required.

The loan limits are up to the cost of education, less other aid, per student. Repayment of the principal and interest may begin 60 days after the loan is fully disbursed or the parent may request deferred repayment.

The filing of the FAFSA is required. Parents may apply for the Parent PLUS at studentloans.gov.

## Alternative Loans

Available from a variety of private lenders. Principal and interest may be deferred while in school, and a co-signer is usually required.

## Valparaiso University Loans

Limited, low interest loans are administered by Valparaiso University. The amounts vary. Contact the Office of Financial Aid for details.

- The Garland Loan Fund

Loans for students majoring in the sciences or mathematics. These will be non-interest bearing loans.

## - Garman Loan Fund

A loan fund has been established by Benjamin L. Garman to help students who cannot qualify for a scholarship but who must have financial assistance or those with scholarships who need more help.

- Nellie Winifred Cheney Overton Memorial Loan Fund

This fund was established by Mr. William J. Overton as a memorial to Mrs. Overton. The income from the fund is available for loans to students from Lake County, Indiana.

- Schell Loan

This loan is funded by the Schell Foundation and is available to undergraduate students from select states.

- Henry Strong Educational Foundation

Provides loans to qualified full-time upper class students under thirty years of age.

## Loan Repayment Terms

Each of the loan programs contains specific repayment terms and conditions which are a part of the promissory note the student signs upon receipt of the loan fund. Students are responsible for being aware of the various loan provisions and thus should review the terms of the repayment obligation prior to accepting funds under these loan programs.

## Loan Repayment Information

Sensible borrowing can not only help pay for college but also help establish a good credit history. Similarly, not making regular payments can result in a poor credit rating or even default status on student loans.

To estimate future repayment obligations, go to studentloans.gov and use their repayment calculators. For example monthly payment on $\$ 20,000$ in Direct Loans at $6.8 \%$ interest will be $\$ 230.16$ per month for ten years.

Federal Direct Loan borrowers will be notified by their loan servicer about repayment of loans. There are a variety of repayment options and options for deferring repayment.

## Alternative Sources of Aid

The following sources are not based on financial need. Non-need based loans are limited to the cost of education less other financial aid, or the annual loan limits, whichever is less.

## Vocational Rehabilitation

Under the provision of Public Law 565, the federal government and the State of Indiana jointly provide funds for scholarship grants-in-aid to students who have a physical or mental impairment which constitutes a vocational handicap. The State Vocational Rehabilitation Division is responsible for the determination of the grants.

## Veterans' Programs

In addition to working with the Veterans' Administration (VA), military veterans should consult with the Financial Aid Office as soon as possible when preparing to enroll at Valparaiso University. The University does participate in the Yellow Ribbon Program under the Post 9/11 GI Bill, otherwise known as Chapter 33. The University awards the Patriot Award which in conjunction with the base Chapter 33 benefit and the additional Yellow Ribbon benefit will cover $100 \%$ of tuition and general fee for undergraduate students. Graduate and law students should refer to their schools' respective policies. The University does limit the number of Yellow Ribbon recipients it funds and priority goes to returning students already in the program and then on a first come, firstserved basis for new students. Veterans are asked to meet with Financial Aid Office staff to discuss their options before enrolling.

## ROTC Programs

Students who participate in the Air Force or Army ROTC programs may receive scholarship assistance through ROTC. Army or Air Force ROTC students who receive full tuition scholarships along with ROTC living and book stipends will also be guaranteed additional scholarships/grants from the University such that the total of all aid will equal at least the tuition, general fees, on campus room and meal plans appropriate for the students' academic grade levels, and books. Air Force ROTC students who receive partial tuition scholarships through ROTC will also receive University scholarship/grants at least in the amount of on campus room and meal plans appropriate for the students' academic grade levels. A student must live in University-owned or controlled housing and be enrolled in a full-time meal plan in order to receive the additional University funding. If University scholarships/grants are part of the ROTC student's award, then total resources including ROTC scholarships and stipends may not exceed the student's cost of attendance as determined by the Financial Aid Office. ROTC students may elect to decline University scholarship/grant aid in order to utilize federal student loan assistance which allows the students to receive aid in excess of the cost of attendance. ROTC students are asked to meet with Financial Aid Office staff to discuss their options before enrolling.

## Valparaiso University Lilly Community Award

Indiana students selected by their local Lilly Community Foundation to receive its full tuition and fees scholarship will also be guaranteed University scholarship/grant aid such that the total of all aid will cover tuition, general fee, on-campus room and meal plan appropriate to the student's grade level, and books. A student must live in University-owned or controlled housing and be enrolled in a full-time meal plan in order to receive the additional University funding.

## Campus Employment

Students are employed in a variety of positions on campus. Open positions are posted on Valparaiso University's "Handshake" web site at www.valpo.joinhandshake.com/login. Students should contact the individual departments with job openings to apply for positions. Students with demonstrated financial need may work under the Federal Work Study Program (FWS). FWS students may also apply for off-campus jobs in the Community Service component of the program. Students may work on campus under the Valparaiso University Work Study Program regardless of financial need.

## Payment of Financial Aid

Most aid is divided and credited to student accounts in equal amounts for each semester. Most aid is ready to disburse at the beginning of each semester, although the actual date that funds are disbursed varies and no aid can be disbursed until all requested documentation has been submitted to and reviewed by the Office of Financial Aid. Aid is credited regularly throughout the semester. Students must be enrolled for the sufficient number of credits (according to the requirements of each program) in a semester to receive financial aid.

Students whose financial aid exceeds the University charges for the semester, may request a refund from the Office of Student Accounts. It is each student's responsibility to verify semester charges, financial aid credits, and refunds for accuracy.

Students receive work-study awards as a direct deposit to their financial institution every two weeks for hours worked in the previous pay period, not as a credit on their student account.

Financial aid for students who withdraw from Valparaiso University will be adjusted based on the University's refund policy. Specific information may be found in the Refund Policy section of this catalog (beginning on page 424).

## Special Students

Certain restrictions apply to financial aid for students who are considered to have "special" status. These are students in certification programs such as teacher/diaconal certification programs or students who have earned a bachelor's degree and return to school to enroll in undergraduate courses necessary as prerequisites to specific graduate programs. In any case, the student is eligible only for Federal (Unsubsidized or Subsidized) Direct and PLUS loans or employment. Not all certificate programs are eligible for loans. It is advised that students with "special student" status meet with a financial aid counselor for detailed information.

## Off-Campus Study

Students enrolled in an off-campus program, including study abroad programs, which are approved for credit by Valparaiso University, are eligible to apply for financial aid. University grants and scholarships are available only for selected Valparaiso University programs.

## Exit Interviews

Prior to graduation, leaves of absence, or withdrawal from the University, students who have accepted loans must complete separate interviews for Federal Direct Loans and Perkins Loans.

## Appeal Procedure

A review of any decision concerning a financial aid package may be requested. First, contact the Office of Financial Aid. If the outcome of the initial review is unsatisfactory, then an appeal may be presented to the vice president for Enrollment Management. The decision of the vice president is final.

## Financial Aid Refund Policy

If a student is due a refund under the Valparaiso University refund policy, and the student has received any financial aid other than Federal Work-Study, part of the refund must be returned to the sponsoring aid programs. The amount of refund is determined in accordance with the University refund policy listed in the catalog (see page 424). Policies for returning a portion of that refund to sponsoring aid programs are as follows.

## Valparaiso University Awards and Scholarships

If a refund balance remains after funds have been returned to the federal programs, a prorated percentage of Valparaiso University funds will be refunded.

## Privately Funded Grants and Scholarships

Some students will be recipients of funds from private donors such as churches, civic groups, foundations, etc. Many of these organizations will provide specific instructions concerning disbursement of their funds to students who withdraw. In the absence of specific instructions, the full scholarship will be applied to one semester. Funds on deposit with the University that the donor designated for future terms of enrollment within the academic year will be returned to the donor.

## Title IV Programs (Federal)

Federal law determines the total amount of refund due, if any, when a student withdraws and how much of that refund must be returned to the federal programs. See page 424.

## State Grants and Scholarships

Refunding proration is done according to specific regulations of the sponsoring state.

## Standards of Satisfactory Academic Progress Policy

Financial Aid recipients must maintain minimum standards of satisfactory academic progress for receipt of federal, state, and most Valparaiso University aid programs. All students receiving financial assistance must maintain an active status in a degree program. Regulations require a maximum time frame for degree completion, a quantitative measurement (credits earned toward a degree), and a qualitative measurement (cumulative grade point average). These three criteria are checked at the end of each academic year in May to determine whether students are maintaining satisfactory academic progress. Graduate and Law students should refer to the Graduate and Law Bulletins for specific policy requirements.

## Time Frame Measurement

Students may attempt up to 150 percent of the hours required for a bachelor's degree. The 150 percent cap is the maximum limit according to federal regulations. The actual credit hour limit may vary depending on the requirements of each degree program. Most programs require 124 hours: for those programs the maximum attempted hours allowed is 186 . Other programs, including music, engineering, nursing, and business degrees require more than 124 hours; therefore the maximum number of attempted hours allowed would be greater.

All attempted hours at Valparaiso University, including regular semesters and summer sessions, as well as any credits transferred from other schools, will apply toward the 150 percent.

## Quantitative Measurement

To comply with the 150 percent time frame requirement, students must complete at least two thirds ( $2 / 3$ ) of all Valparaiso University hours attempted with a passing grade. At the end of each academic year, each student's Valparaiso University total hours completed will be compared to the Valparaiso University total hours attempted to determine whether they are meeting this requirement.

## Qualitative Measurement

Minimum cumulative grade point average standards are as follows:

| Freshmen (less than 24 hours completed) | 1.65 |
| :--- | :--- |
| Sophomores (24 to 55 hours completed) | 1.75 |
| Junior and above (56 or more hours completed) | 2.00 |

## Incompletes, Withdrawals, Repeated Courses, and Non-Credit Remedial Courses

Incompletes and withdrawals will count as hours attempted but not completed. If incompletes are later completed, they will be reflected when progress is again checked, or sooner if the student appeals. Repeated courses will add to total hours attempted and hours completed. The new grade will be included in the grade point average calculation, which will be considered when progress is again checked, or sooner if the student appeals.

Valparaiso University does not offer noncredit remedial courses.

## Appeals and Reinstatement

Students whose academic progress is not in compliance with these standards will be notified in writing after the Spring semester that their eligibility for aid has been terminated. They will also be advised of the appeal and reinstatement policy at that time.

Students may appeal termination of their financial aid eligibility based on extenuating circumstances, which may include illness, death in the family, other circumstances beyond the student's control, or special academic circumstances. If the appeal is approved, the student will normally have one semester to attain grade point average and completed credit hour standards specified by the appeals committee. Students who do not appeal, or whose appeal is denied, will not regain financial aid eligibility until the semester after they have attained the appropriate grade point average and completed credit hour standards. The student should contact the Office of Financial Aid to initiate reinstatement.

Appeals should be directed to the Office of Financial Aid Appeals Committee.

## Other Considerations

Summer school credits may be considered in evaluating attainment of the academic progress standards on an appeal basis
Certain aid programs have shorter timeframe limits, and different grade point average requirements. Recipients of Valparaiso University Scholarships and other merit awards should refer to their scholarship award letter for the terms and conditions for renewal. In addition, federal loan programs have cumulative limits that may be reached before the maximum time-frame limits are reached.

## Student Financial Aid Responsibilities

Students have the following responsibilities regarding financial aid assistance:

1. To pay special attention to their application for financial aid, complete it accurately, and submit it on time to the proper place.
2. To know and meet all deadline dates for applying or reapplying for aid.
3. To provide all documentation, corrections, and new information requested by the Office of Financial Aid or the agency to which the application is submitted.
4. To notify the institution of any information that has changed since first applying for financial aid.
5. To read, understand, and keep copies of all forms that they are asked to sign.
6. To repay student loans on a timely basis and keep the University informed of current address.
7. To attend any necessary interview sessions related to the loan.
8. To be aware of all published financial aid policies, understand them, and comply with these policies.

## Student Financial Aid Rights

1. To know what financial assistance is available, including information on all federal, state, and institutional financial aid programs.
2. To know the procedures and deadlines for submitting applications for each available financial aid program.
3. To know how the institution selects aid recipients.
4. To know how and when payments will be made and to know the refund policy for students who withdraw.
5. To request a review of the financial aid package should there be changes in the family's ability to meet costs of attendance.
6. To know how the institution determines whether the student is making satisfactory progress and what happens if he or she is not.
7. To be fully informed of the terms and provisions of loan payments, including typical repayment schedules.
8. To appeal any decisions relating to the determination of financial aid eligibility.

## Scholarships

Learn more about Scholarships at Valpo online.

Scholarships are funded by Valparaiso University alumni, parents, friends, corporations, foundations, churches, and organizations. Donors may establish Endowed Scholarships where the earnings from the funds are used to provide assistance to students.

## Application Required

Students should contact the indicated department or the Office of Financial Aid for further information about the following scholarships.

- Oliver W. and Emma W. Allen Scholarship Fund

Provides annual awards to students, selected through a special process, who are preparing for rostered church professions within the Lutheran Church (ordained ministries, commissioned ministries, associates in ministry, or lay teachers). Students of other church bodies, preparing for rostered ministries in their respective denominations, would also be eligible as funds permit. Contact the Office of Undergraduate Admission for more information.

- Caterpillar Endowed Scholarship

Funded by the Caterpillar Foundation, this scholarship will be awarded to freshman engineering students. Selected students will be invited to apply by February 1st for this scholarship based on merit. The students nominated to receive this scholarship will be selected through a competitive, one-time application process based on merit which may include an interview with the College of Engineering Recruiting Committee. A service learning component will be required of the recipients in order for the scholarship to be renewed for up to four years.

- Hesse Scholarship

Funded by former College of Engineering Dean Herman Hesse and his wife, Helen, this scholarship will be awarded to 12 freshman engineering students each year. This is a renewable scholarship for a total of four years when criteria is met. Scholarship applications will be mailed to invited students in December. The deadline for applications is February 1 st and recipients will be chosen by the Hesse Center Director no later than March 1st.

- Shirley Ayers Jud Memorial Endowed Guild Scholarship

Funded by memorials to Shirley Jud and gifts by Dr. Henry G. Jud, matched in part by Unisys matching gifts in 1989, 1990, 1991, this scholarship will be awarded to a freshman student with academic ability. The scholarship may be renewed if the recipient maintains a 3.0 or better grade point average. This scholarship recipients shall be sons or daughters of Guild members. Application forms are available from the Office of Undergraduate Admission or the Guild Office.

- James S. Kemper Foundation Scholarship

To be awarded to Christ College students. Candidates must have substantial academic potential and ability, and the maturity, perspective, and motivation to undertake summer work experience in a rigorous business environment each of their undergraduate summers. A Kemper Foundation officer selects the recipient from three finalists identified by the Christ College deans.

- The Donna Spanopoulos Memorial Scholarship

Annual award. Preference to senior student(s) enrolled in the Nursing program at Valparaiso University, who express an interest in specializing in pediatric care and have demonstrated clinical and academic ability. Financial need not a criterion.

- Valparaiso University Guild (Cookbook) Endowed Scholarship

New scholarships will be awarded annually to freshmen students with financial need and with academic ability. The scholarships may be renewed if the recipients maintain a 3.0 or better grade point average. The scholarship recipients shall be sons or daughters of Guild members. Application forms are available from the Office of Undergraduate Admission or the Guild Office.

- Valparaiso University Guild Past National Officer's Endowed Scholarship

Initiated by the Past National Presidents and Executive Directors in the name of all the women who have served as presidents, vice presidents, secretaries, treasurers and executive directors of the Guild, this scholarship is awarded to two juniors with a 3.0 grade point average at the University. These scholarships are awarded to sons or daughters of University Guild members. It may be renewed if the student maintains a 3.0 or better grade point average. Application must be made for this scholarship. Application forms are available from the Office of Undergraduate Admissions or from the Guild Office.

- William Randolph Hearst Endowed Scholarship

The William Randolph Hearst Endowment was funded by the Hearst Foundation to establish scholarships for returning fulltime undergraduate African-American and Hispanic/Latino America students attending Valparaiso University. To be eligible, a student must have and maintain a 2.5 GPA for renewal purposes, demonstrate financial need, exhibit leadership qualities, and agree to participate in multicultural activities. Applications are available in the Office of Multicultural Programs.

- Reimer Family Endowed Scholarship for Servant Leadership

Funded by Ronald and Janet Reimer, the Reimer Family Endowed Scholarship for Servant Leadership provides awards to seniors who, during their college career, have demonstrated significant servant leadership, and who will continue to provide servant leadership in a Christian church and community in the future. The selection committee will review the depth and scope of the applicant's servant leadership, not only the number of hours or the number of involvements reported. Application forms are available in the Chapel of the Resurrection.

- Indiana Minority Teacher and Special Education Services Scholarship Program

Administered by the Indiana Commission for Higher Education. Eligible students agree in writing to pursue their teaching career in an Indiana accredited school or vocational rehabilitation or other developmental disability center for three out of the first five years following completion of program. Eligible students must be Indiana residents, United States citizens, and a minority student seeking teacher certification to teach in an accredited school in Indiana, and have a minimum grade point average of 2.0/4.0. Renewable for total of four annual scholarships. Students must reapply each year. Financial need may be considered. Applications available at www.in.gov/che.

## No Application Required

Listed below are the scholarships awarded annually by Valparaiso University. If additional information is required, the student will be contacted by the Office of Financial Aid. Students need not make a separate application or request to be considered for these awards.

Note: The amount and number of awards given in endowed scholarships varies depending on the earnings of the established fund.

- The 40th Class Reunion Endowed Scholarship Fund
- The James Albers Endowed Scholarship Fund
- The Waldemar H. and Alyda Albers Endowed Scholarship
- The Alfred R. and Jane M. Looman Endowed Scholarship
- The Anna B. Althans Endowed Scholarship
- The Alumni Board Endowed Scholarship (PACT)
- The Alumni Heritage Award Endowed Scholarship Fund
- The Ament-Brenner Endowed Health Care Scholarship
- The Reverend Theodore \& Vera Andres Memorial Endowed Scholarship
- The Robert Augustine Memorial Scholarship
- The Oscar H. and Wilhelmetta Bahr Memorial Endowed Scholarship
- The Eric Lee Bandick Endowed Scholarship Fund
- The Bark Memorial Endowed Scholarship Fund
- The Mr. and Mrs. Harry G. Barr Endowed Scholarship Fund
- The Herbert C. Bartelt Endowed Scholarship Fund
- The Otto and Gertrude Bartelt Endowed Scholarship (PACT)
- The Carl H. Barz Memorial Endowed Scholarship
- The Aimee Becker Memorial Endowed Scholarship Fund
- The Millard and Dianne Becker Scholarship Fund
- The Dr. \& Mrs. Henry Frederick Beckman Endowed Scholarship
- The Donald \& Eunice Behrman Endowed Scholarship Fund
- The Victor H. Bergman Endowed Scholarship Fund
- The Wilfred and Olga Bernthal Endowed Scholarship Fund
- The Leo \& Jean Cunningham Besozzi Endowed Scholarship Fund
- The Bethel Lutheran Church of University City, MO Scholarship
- The Lionel "Bill" Bigman Memorial Scholarship
- The Black Law Students Alumni Association Endowed Scholarship
- The Edwin O. Bleich Endowed Scholarship Fund
- The Charles H. and Elizabeth Blume Endowed Scholarship Fund
- The Mrs. Amalie Bokerman Endowed Scholarship
- The W. H. and Phyllis Dierker Boltz Endowed Scholarship
- The John V. Borgerding Endowed Scholarship Fund
- The Mr. and Mrs. Stanley E. Bovim Endowed Scholarship Fund
- The VU Bowen Endowed Scholarship Fund
- The Otis R. and Elizabeth Bowen Family Endowed Scholarship Fund
- The Professor John Bowman Endowed Scholarship Fund
- The Daniel M. Brandt Endowed Scholarship Fund
- The Evelyn Ann Brandt Endowed Scholarship
- The Martin W. Brandt Ph.D. Memorial Endowed Scholarship Fund
- The Paul \& Cleo Brandt Endowed Scholarship Fund
- The Carl A. Jr. and Isabelle M. Brauer Endowed Scholarship Fund
- The Ellen Sweet Brauer Endowment for Education
- The Karen L. Eggerding Brelje Endowed Scholarship Fund
- The Ament Brenner Endowed Scholarships in Health Care
- The A. John and Bruth J. Briel Endowed Scholarship Fund
- The Norman H. and Catherine C. Brockmeier Scholarship Fund
- The Ruth Brown Memorial Endowed Scholarship Fund (PACT)
- The Julius C. Bruechner Endowed Scholarship Fund
- The William G. Buchinger Endowed Scholarship Fund
- The Luella \& Herbert P. Buetow Endowed Scholarship Fund
- The Mrs. Ella M. Burkhart Music Endowed Scholarship
- The Allen L. Burreson Memorial Scholarship
- The Selma Deeke Busse Endowed Music Scholarship Fund
- The Luella and Walter Bussert Endowed Scholarship
- The Carl J. Schenk Memorial Endowed Scholarship
- The Kermit H. Carlson Endowed Scholarship Fund (PACT)
- The Paul and Cecilia Carmichael Endowed Scholarship Fund
- The Caterpillar Endowed Scholarship
- The Olive and Holger Cattau Memorial Endowed Scholarship
- The Chesrow Family Endowed Scholarship Fund
- The Dr. Eugene J. Chesrow Memorial Endowed Scholarship Fund
- The John E. Christen Memorial Endowed Scholarship Fund
- The Jay W. and Doris K. Christopher Endowed Scholarship
- The Emma E. Claus Endowed Scholarship Fund
- The Emma Claus Law School Endowed Scholarship Fund
- The Robert F. and Caroline McMillan Collings Endowed Scholarship
- The Community Foundation, Inc. Endowed Nursing Scholarship
- The Concordia Lutheran Church-Kirkwood, MO Endowed Scholarship
- The Concordia Lutheran Church-Wilmington, DE Endowed Scholarship
- The Conrad Family Scholarship Fund
- The Delma Coovert Memorial Endowed Scholarship Fund
- The Kenneth B. \& Todd C. Copeland Family Memorial Endowment
- The Eugene Crawford Memorial Endowed PACT Native American
- The Czamanske Family Endowed Scholarship
- The Sophia F. Daebel Scholarship in Nursing
- The Arthur Vining Davis Endowed Scholarship Fund
- The Edwin F. Deicke Endowed Scholarship Fund
- The Tom and Violet DeLassus Endowed Scholarship Fund
- The Matthew M. DeLoera Endowed Scholarship
- The Harold "Slim" and Betty (Klewin) Denig Endowed Scholarship
- The Randy and Linda Dessau Law School Scholarship Fund
- The Donna and Lonnie Dodge Endowed Memorial Scholarship Fund
- The Robert and Ann Doering Scholarship Fund
- The Eric Domroese Endowed Scholarship
- The Wilber C. and Donald W. Dopp Memorial Endowed Scholarship
- The Wilbur H. \& Marguerite M. Dosland Endowed Scholarship Fund
- The Honorable Robert K. Duerr and Family Scholarship
- The Carl and Mildred Duesenberg Scholarship Fund
- The Hugo and Edna Duesenberg Endowed Scholarship
- The Lorraine F. Duesenberg Endowed Scholarship
- The Richard W. and Phyllis Duesenberg Endowed Scholarship
- The Dr. and Mrs. Rupert Dunklau Endowed Scholarship Fund
- The Bruce and Linda Eastmond Endowed Scholarship Fund
- The Bruce and Linda Eastmond Arts \& Sciences Prize Endowed Fund
- The Linda Ann Eastmond Memorial Endowed Scholarship Fund
- The Charles and Ruth Ebenreiter Family Endowed Scholarship Fund
- The Oliver H. Eggers '36 Memorial Scholarship Fund
- The Reverend Ernest H. Eggers Memorial Endowed Scholarship
- The Susan Jenny Ehr Endowed Scholarship Fund
- The Prof. James F. Ehrenberg Memorial Fund
- The Reverend \& Mrs. P.J. Eickstaedt Family Endowed Scholarship
- The E. Stanley and Calista Enlund Endowed Scholarship Fund
- The Henry F. and Elsie M. Engel Endowed Scholarship Fund
- The Erna J. Erickson Memorial Fund
- The Erwin \& Helen Gratzer Endowed PACT Scholarship
- The Larry G. Evans Scholarship in Professional Responsibility
- The Twila Fabrizius Endowed Scholarship
- The Faith Lutheran Church-Lake Forest, IL Endowed Scholarship
- The Fedder Endowed Scholarship Fund
- The Frank and Jeannette Ferguson Memorial Endowed Scholarship
- The Fiesler Family Endowed Scholarship
- The Ruth E. Findeisen Memorial Fund
- The Helen Firnhaber Memorial Endowed Scholarship
- The Carl Christian Fleischer Memorial Endowed Scholarship
- The Henry W. Fleming Endowed Scholarship Fund
- The Esther H. and Elmer E. Foelber Memorial Endowed Scholarship
- The Herbert \& Marie Foelber Endowed Scholarship Fund
- The Edith Schuchardt Forsberg Family Memorial Endowed Scholarship
- The Arthur Franke Memorial Endowed Scholarship
- The Paul and Emilie Freitag Endowed Scholarship Fund
- The Paul W.D. Jr. \& Alita H. Freitag Endowed Scholarship Fund
- The Leslie F. and Katherine D. Frerking Endowed Scholarship Fund
- The Earl R. Fruehling Endowed Scholarship Fund
- The William A. Fuzy Family Endowed Scholarship Fund
- The Daniel and Thomas Gahl Memorial Endowed Scholarship (PACT)
- The Dr. Ernest J. Gallmeyer Memorial Endowed Scholarship Fund
- The Bette J. Galow Memorial Scholarship Fund
- The Dr. \& Mrs. E.C. Galsterer Endowed Scholarship Fund
- The Gamma Phi Anniversary Endowed Scholarship Fund (PACT)
- The William C. Gast Memorial Endowed Scholarship Fund
- The Gatz Family Endowed Scholarship
- The Harold C. Gearing Endowed Scholarship Fund
- The Judith D. Gehrs Endowed Scholarship
- The General Geography Scholarship
- The General Scholarship Endowment
- The George F. and Beatrice A. Bone Endowed Scholarship
- The Herbert H. Gerke Endowed Scholarship
- The Lawrence C. and Alta Gerken Endowed Scholarship
- The Henry and June Giebel Study Abroad Endowed Scholarships
- The Erwin E. Goehring Endowed Scholarship Fund
- The Mr. \& Mrs. William H. Gouty Endowed Scholarship
- The Grace Lutheran Church-River Forest, IL Endowed Scholarship
- The Grace Lutheran Church-Tulsa, OK Endowed Scholarship Fund
- The Grace Lutheran Church-Winter Haven, FL Endowed Scholarship
- The Betty J. Granberg Endowed Scholarship
- The Erwin and Helen Gratzer Endowed Scholarship Fund (PACT)
- The William B. and Nellie Booth Green Endowed Scholarship Fund
- The Earl L. Grieger Memorial Endowed Scholarship Fund
- The Professor Charles R. Gromley Memorial Endowed Scholarship
- The Leona M. Groth Memorial Endowed Scholarship
- The Loren W. Grueber Memorial Endowed Scholarship was established by
- The Charles J. and Anna Gruenbaum Memorial Scholarship in Nursing
- The Herman and Beatrice Grunau Endowed Scholarship Fund
- The Henry C. and Ura E. Guhl Endowed Scholarship Fund
- The VU Guild Past National Officers Endowed Scholarship Fund
- The Valparaiso University Guild Scholarship Fund
- The Frances and Lowell Hager Endowed Scholarship
- The William F. Hahn Endowed Scholarship
- The Richard W. Hakanson Endowed Scholarship
- The Charles A. Halleck Endowed Scholarship Fund
- The Arthur E. Hallerberg Memorial Endowed Scholarship Fund (PACT)
- The Elsa and Lloyd Halverson Endowed Scholarship Fund
- The Clarence and Elsie Hansen Endowed Scholarship Fund
- The Walter D. and Helene A. Hansen Endowed Scholarship Fund
- The Oliver R. and Bertha Harms Endowed Board Scholarship
- The Oliver R. and Bertha Harms Family Endowed Scholarship Fund
- The Edward W. Hartman Endowed Memorial Scholarship Fund
- The Reverend Harlan Hartner Endowed Scholarship Fund
- The Frederick H. and Louise Rice Hartwig Endowed Scholarship
- The Lilly Hayden Memorial Endowed Scholarship Fund
- The Reverend Harry H. Haysbert Endowed Scholarship Fund (PACT)
- The William Randolph Hearst Scholarship Endowment
- The Malcolm J. Heidt Athletics Scholarship
- The Malcolm J. Heidt Endowed Scholarship
- The Sara E. Heidt Scholarship in Nursing
- The Walther T.F. \& Laura M. Heinicke Scholarship Fund
- The Karl T. Hellerman Endowed Scholarship
- The John and Dorothea Helms Endowed Scholarship Fund
- The Karl H. and Luetta M. Henrichs Endowed Scholarship Fund
- The Dr. Karl H. Henrichs Endowed Scholarship
- The Hildegarde Herfurth Endowed Scholarship
- The John and Rosa Herscher Endowed Scholarship Fund
- The Herman Hesse Endowed Scholarship
- The Mr. and Mrs. Peter Hessler Endowed Scholarship Fund
- The William and Vera Heyne Endowed Bach Scholarship Fund (PACT)
- The Charles H. Hickman Memorial Endowed Scholarship Fund
- The Dee Hildebrandt and Donna Hildebrandt Senior Endowed Memorial
- The Mary Hilgemeier Endowed Scholarship Fund
- The Heidi Steskel Hill Memorial Endowed Scholarship Fund
- The Jack Hiller Endowed Scholarship
- The Rachel Anne \& Anne Elizabeth Hillila Endowed Nursing Scholarship
- The Rose L. Hilt Memorial Endowed Scholarship
- The Walter S. Hiltpold Endowed Scholarship Fund
- The John F. and Patricia J. Hinkey Scholarship
- The Harold Hoeft Memorial Scholarship
- The John Hoeft Memorial Scholarship
- The William E. and Jane E. Hoehner Endowment
- The Richard J. Hoerger Endowed Scholarship Fund
- The Harold and Margaret Hoffman Endowed Scholarship Fund
- The Margaret H. Hoffman Memorial Endowed Scholarship Fund
- The Dr. O.C.J. Hoffmann and Dr. A.G. Huegli Endowed Scholarship
- The Clara Hofmann Endowed Scholarship Fund
- The Edwin Gustav Hoffmann Endowed Scholarship
- The Louis C. Holland Endowed Scholarship Fund
- The Oscar Homann Endowed Scholarship Fund
- The Hope Lutheran Church-Park Forest, IL Endowed Scholarship
- The A.G. Huegli Southeastern Michigan Endowed Scholarship Fund
- The Dr. and Mrs. A.G. Huegli Endowed Scholarship for Leadership
- The Joyce Huegli Endowed Memorial Scholarship Fund
- The Goldie Hunt Memorial Endowed Scholarship Fund
- The James and Karen Huston Endowed Scholarship Fund
- The Immanuel Lutheran Church-Michigan City, IN Endowed
- The In Thy Light - The Martin Family Scholarship Endowment
- The Incentive Endowed Scholarship Fund (PACT)
- The Judge and Mrs. F. A. Jaeckel Memorial Endowed Scholarship
- The David A. Jenny Endowed Scholarship
- The Frederick Peter Jenny Endowed Scholarship
- The Kristina Brockopp Jenny Endowed Scholarship
- The Marisa M. (Gervasio) Jenny Endowed Scholarship
- The Stephen R. Jenny Endowed Scholarship
- The Richard F.\& Martha W. Jeske Endowed Scholarship
- The Edward Jiede Jr. Endowed Scholarship
- The Professor Edwin \& Jean Johnson Endowed Scholarship
- The Ralph \& Marilyn Johnson Endowed Scholarship Fund
- The Dr. Henry Jud Endowed Scholarship
- The Shirley Ayers Jud Memorial Endowed Scholarship Fund
- The Wilfed \& Eleanora Junke Endowed Scholarship Fund
- The Ruth Just Endowed Scholarship
- The Irma B Kampschmidt \& Eleanor Pennekamp Memorial Endowed
- The Dr. Philip G. Kapfer Memorial Endowed Scholarship
- The Bud Keller Memorial Endowed Scholarship Fund (PACT)
- The Norman W. and Joanne C. Kettner Scholarship Fund
- The Susan Kilroy Memorial Endowed Scholarship
- The Dwight M. Kinder Endowed Memorial Scholarship for Law
- The Stephen R. Kinder Endowed Music Scholarship
- The Sharon L. King Endowed Scholarship for Law School Students
- The O. Charles and Dorothy Klingsick Endowed Scholarship
- The Edwin H. Klinkerman Endowed Scholarship
- The Walter C. \& Elizabeth K. Klug Memorial Endowed Scholarship
- The Ernie T. Knapp Memorial Endowed Scholarship Fund
- The Knight Foundation Endowed Scholarship Fund
- The John A. Knoeppel Memorial Endowed Scholarship
- The Mr. and Mrs. Edwin H. Koeneman Endowed Scholarship
- The Erra E. Koeneman Endowed Scholarship
- The Eleanor R. Koening Memorial Endowed
- The Herbert H. and Edith A. Koenig Memorial Endowed Scholarship
- The Dean W. Kohlhoff History Scholarship
- The Martin and Dora Koschmann Scholarship in Church Music
- The Jayne Hoffmann Kraegel Memorial Endowed Scholarship Fund
- The Lauretta M. Kramer Memorial Endowed Scholarship
- The Matilda M. Kramer Memorial Endowed Scholarship Fund
- The George V. Krampien Endowed Scholarship in Law
- The John W. \& Clara A. Krathwohl Endowed Scholarship
- The Mr. and Mrs. Gilbert W. Krause Athletic Endowed Scholarship
- The Carl Krekeler Endowed Scholarship Fund
- The Carl and Viola Krentz Endowed Scholarship
- The Paul G. Krentz Endowed Scholarship (PACT)
- The Ruth Krentz Endowed Scholarship (PACT)
- The William H. Kroeger Scholarship Fund
- The William H. Kroeger Endowed Scholarship Fund (PACT)
- The John W. and Mary L. Krueger Endowed Scholarship
- The Krumsieg Scholarship Fund
- The Dale K. and Karen Kruse Endowed Scholarship Fund
- The Arlene E. Laesch Endowed Scholarship Fund
- The Charles and Meta Laesch Endowed Scholarship Fund
- The Clara A. Laesch Endowed Scholarship Fund
- The William F. and Florence R. Laesch Endowed Scholarship Fund
- The Ernest C. and Adelaide E. Laetz Endowed Scholarship Fund
- The Laetz Endowed Scholarship in Business
- The Ruth May Landis Scholarship in Church Music
- The Erwin A. and Eleanor H. Lange Endowed Scholarship Fund
- The Harry \& Emma Lange Endowed Memorial Scholarship Fund
- The Paul Lange Endowed Tuition Scholarship Fund
- The Steve and Diane Langer Law Student Endowed Scholarship Fund
- The Edward and Margaret Larson Endowed Scholarship Fund
- The Tommy Lasorda Endowed Scholarship Fund
- The Richard H. Laube Endowed Scholarship Fund (PACT)
- The Charles E. \& Gladys M. Laue Endowment Scholarship Fund
- The Charles E Laue and Herman R Rahn Endowed Scholarship
- The Laura \& Lindsay Endowment Fund
- The Endowed Law Scholarship Fund for Jewish Students
- The School of Law Board of Visitors Endowed Scholarship
- The Law School General Scholarship Endowment
- The Blase Lazzara Memorial Endowed Scholarship Fund
- The A.J.W. and Elfrieda LeBien Endowed Scholarship Fund
- The Dr. and Mrs. H.A.P. Leininger Endowed Scholarship Fund
- The Edith S. Lessor Endowed Scholarship Fund
- The George and Floretta Lentz Sr. Endowed Scholarship Fund
- The Stephen and Elaine Lewis Endowed Scholarship
- The Ernest and Clara M. Lichtfuss Endowed Scholarship Fund
- The John A. Liechti Endowed Scholarship
- The David A. \& Jane E. Lienau Endowed Scholarship
- The Nancy Lieneck Memorial Endowed Scholarship
- The Edward W. and Sara E. Lieske Scholarship in Engineering
- The David L. Litten Endowed Scholarship Fund
- The George H. Liu Memorial Endowment Fund
- The Scott G. Lohr Endowed Scholarship Fund
- The Mr. and Mrs. Orval M. Lohse Endowed Scholarship Fund
- The Lynette and Norman Luekens Endowed Scholarship Fund
- The Lukens Family Endowed Scholarship
- The Lutheran Brotherhood Challenge Endowed Scholarship Fund
- The Lutheran Deaconess Endowed Scholarship Fund (PACT)
- The Esther \& Karl Lutze Endowed Scholarship for Minority Students
- The Walter P. MacNary Memorial Endowed Scholarship
- The Orval L. and Maud L. Mains Memorial Endowed Scholarship Fund
- The Dr. \& Mrs. Max K. Mallon Endowed Scholarship
- The Dan and Louise Manka Chemistry Endowed Scholarship Fund
- The Manning \& Spannagel Endowed Scholarship
- The Albert A. and Martha Marks Endowed Fund (PACT)
- The Robert Marowske Endowed Scholarship Fund
- The Dr. \& Mrs. E.W. Marquardt Scholarship
- The Margery Martin Endowed Scholarship Fund
- The G. H. Maskus Endowed Scholarship
- The Russell H. Matthias Endowed Scholarship Fund
- The Irene Mayer Endowed Scholarship
- The Katherine McCallum Endowed Scholarship Fund
- The James H. McGill Memorial Endowed Scholarship Fund
- The McGregor Fund Endowed Scholarship
- The J. Ron and Joanne McLeod Endowed Scholarship
- The Vera M. McLeod Memorial Endowed Scholarship
- The Mr. \& Mrs. A. A. Meitz Endowed Scholarship Fund
- The Memorial Endowed Scholarship
- The Ernest A. Menzel Endowed Scholarship Fund
- The Mr. \& Mrs. Dirk Meyer Endowed Scholarship
- The Gerhardt F. Meyne Endowed Scholarship Fund
- The Michigan Student Endowed Scholarship Fund
- The Helen Miller Endowed Scholarship Fund
- The Minnesota Merit Endowed Award Fund
- The Dean H. Mitchell Endowed Scholarship Fund
- The Marie Moehring Endowed Nursing Scholarship Fund
- The Dr. \& Mrs. Robert C. Moellering Endowed Scholarship Fund
- The Henry F. Moellering Endowed Scholarship Fund
- The Mr. \& Mrs. Henry J. Mollering Endowed Music Scholarship
- The Drs. Charles and Florence Montz Endowed Scholarship Fund
- The R. Stuart and Margaret Moore Memorial Endowed Scholarship
- The Amy Morenz Memorial Scholarship
- The Morrison Foundation Endowed Scholarship
- The Clara Mueller Scholarship Endowment
- The HFC Mueller Scholarship Endowment
- The Samual A. Mueller Scholarship Endowment
- The Gail (Hendrickson) and Robert Muir Endowed Scholarship Fund
- The Martin David Mundt PACT Endowed Scholarship Fund
- The Hildegard Must Memorial Endowed Scholarship
- The George L. and Mary S. Myers Endowed Scholarship
- The Max and Judith Nagel Endowed Scholarship Fund
- The Nancy Wehmeier Nagel and Robert B. Nagel Prize
- The Mr. and Mrs. Martin Nehring Endowed Scholarship
- The Shirley J. Neitzel Memorial Organ Endowed Scholarship Fund
- The J. Melvin \& Lucille G. Nelson Endowed Psychology Scholarship
- The Faye Newton Endowed Scholarship Fund (PACT)
- The Nickless Family Endowed Scholarship Fund
- The Marilyn Niequist Endowed Scholarship Fund
- The Arleen Norden Endowed Scholarship
- The Marilyn L. Norstedt Memorial Endowed Prize
- The Nicholas H. and Marguerite Lilly Noyes Endowed Scholarship
- The Nuechterlein Endowed Scholarship Fund (PACT)
- The Carl and Arnold Nuechterlein Endowed Scholarship Fund
- The Valparaiso University College of Nursing Scholarship
- The Joel S. Oberman Endowed Basketball Scholarship
- The Oberst Family Scholarship Fund
- The Arnold W. Oestmann Endowed Scholarship Fund
- The Eleanor Davis Oexemann Law Endowed Scholarship
- The Ohio Annual Scholarship
- The Reverend Armin and Evelyn Oldsen Endowed Scholarship
- The Oliver W. Allen and Emma W. Allen Endowed Scholarship
- The Helen Mae Olson Memorial Endowed Scholarship
- The Walter E. Olson Memorial Endowed Scholarship
- The Orling Family Endowed Scholarship Fund (PACT)
- The Thomas \& Joyce Otten Memorial Endowed Scholarship Fund (PACT)
- The Our Redeemer Lutheran Church, South Bend, IN Endowed Scholarship
- The Our Savior Lutheran Church Raleigh, NC Endowed Scholarship Fund
- The Pacific Hills Lutheran Church Omaha, NE Endowed Scholarship
- The Mollie V. Page Endowed Scholarship Fund
- The Patterson McLean Friedrich French Award Endowed Scholarship
- The Timothy W. and Leslie H. Paul Endowed Scholarship
- The Pauling Music Endowed Scholarship (PACT)
- The Mel Peihl Endowed Scholarship for Christ College
- The Prof. Charles G. Peller \& John Van Alstyne Peller Scholarship
- The Peters Family West Michigan Endowed Scholarship
- The Gilbert A. Peters Memorial Endowed Scholarship Fund
- The Professor Carol Petersen Award in French and German
- The Arthur F. Peterson Endowed Scholarship Fund
- The Ella Pfiefer Endowed Scholarship
- The Margaret A. Pfeiffer Endowed Scholarship
- The Irma Pflueger Endowed Lutheran Deaconess Scholarship (PACT)
- The Phi Delta Theta Class '84 Endowed Scholarship Fund (PACT)
- The Phi Mu Alpha Endowed Scholarship Fund (PACT)
- The Paul F. Phipps Merit in English Endowed Scholarship (PACT)
- The Eleanor Elizabeth Pieper Scholarship
- The Hattie Lowe Pierce Endowed Scholarship Fund
- The Pilgrim Evangelical Lutheran Church of Detroit Scholarship
- The Edward and Marie Plucinski Endowed Scholarship Fund
- The Arthur H. Poepp Endowed Memorial Scholarship
- The Robert K. Pohl and Lucile M. Pohl Memorial Scholarship
- The Pohlman Family Endowed Scholarship Fund
- The Arthur E. Pohlman Scholarship
- The Paul and Evelyn Ponitz Endowed Scholarship Fund
- The Rodney B. Poppe Endowed Scholarship Fund
- The Porter County Cancer Society Endowed Scholarship Fund (PACT)
- The Professor Henry W. and Laura M. Prahl Endowment Fund
- The Mrs. Hazel Predoehl Endowed Scholarship
- The Presidential Minority Scholarship Endowment Fund
- The President's Scholarship
- The Vernon F. and Katherine H. Radde Endowed Scholarship
- The William and Emma Rakowsky Endowed Scholarship Fund
- The Elizabeth Raney Endowed Scholarship
- The Charles and Elizabeth Rau Law Endowed Scholarship Fund
- The Reimer Family Endowed Scholarship for Servant Leadership
- The Reverend and Mrs. Arthur T. Reinke and the Reverend \& Mrs. Augustus Reinke Memorial Endowed Scholarship
- The George H. Reinker Scholarship Fund
- The Alton F. Riethmeier Memorial Endowed Scholarship (PACT)
- The Robert \& Eleanor (Siems) DeVries Fine Arts Endowed Scholarship
- The Sandra Felton Roberts Memorial Endowed Scholarship (PACT)
- The Larry A. and Kathleen A. Roesner Endowed Scholarship
- The Walter \& Dorothy Rogosheske Endowed Scholarship (PACT)
- The Cora H. Rosin Memorial Endowed Scholarship
- The Waldemar M. Roth Memorial Endowed Scholarship
- The Leona Rotzoll \& Elsie Skusa Memorial Endowed Scholarship
- The Walter C. Gudrun M. Rubke Endowed Scholarship Fund
- The Judge Robert D. Rucker, Jr. Endowed Law Scholarship Fund
- The Adele Ruettgers Scholarship Fund
- The Noah B. Ruff Endowed Memorial Scholarship
- The August and Helene Ruhe Endowed Scholarship
- The Bernice Lillie Ruprecht Endowed Scholarship Fund (PACT)
- The Freeman and Frances Russell Endowed Scholarship Fund
- The Russler Family Endowed Scholarship
- The Clemonce \& Glenice Sabourin Endowed Scholarship Fund (PACT)
- The Gerhard Salzmann Endowed Scholarship
- The San Diego Guild Alumni Endowed Scholarship Fund (PACT)
- The Judy Satikas and Julie Kline Memorial Endowed Scholarship
- The James Savage Endowed Scholarship Fund
- The Walter W. Schantz Endowed Scholarship
- The Frederick A. Schaper Endowed Scholarship Fund
- The Gilbert L. Schaus Memorial Endowed Scholarship Fund
- The Philip Scheid Family Endowed Scholarship
- The Lee R. Schlender Endowed Memorial Scholarship
- The William E. Schlender Scholarship
- The Walter E. and Theresa N. Schmalz Memorial Endowed Scholarship
- The Jane Conway Schmeckpeper Endowed Scholarship Fund
- The Dr. Richard Schmidt Endowed Scholarship
- The Dr. Robert V. Schnabel Endowed Scholarship Fund
- The Mr. \& Mrs. Henry J. Schneider Endowed Scholarship Fund
- The Richard A. Schoenbohm Memorial Endowed Music Scholarship
- The School of Law Alumni Board of Directors Scholarship
- The Kermit A. Schottman Scholarship in Law Endowment
- The Paul Schrage Endowed Scholarship Fund
- The Marjorie (Peggy) Schroeder and Mayme Martin Endowed Scholarship
- The Pastor Carl \& Bert Schuette Endowed Scholarship Fund (PACT)
- The Dr. and Mrs. Ronald G. Schultz Endowed Scholarship
- The Rev. \& Mrs. Walter G. Schultz Endowed Scholarship Fund
- The Andrew \& Margaret Schulze Endowed Scholarship Fund (PACT)
- The Dorothy Schumacher Endowed Scholarship Fund
- The Dr. Walter and Delta Jean (Newman) Schur Memorial Scholarship
- The John H. Schuth Memorial Scholarship
- The Schwan Family Endowed Scholarship
- The Dana Schwanholt Memorial Endowed Scholarship (PACT)
- The Albert F. and Miriam B. Scribner Endowed Scholarship
- The Elmer Seebeck Memorial Endowed Scholarship
- The Susan E. Seeber Memorial Endowed Scholarship Fund
- The William T. and Eunice E. Seeber Endowed Scholarship Fund
- The Ray \& Marie Seegers Family Fund
- The Seltz Memorial Scholarship Fund
- The Servant Leadership Endowed Scholarship Fund
- The Seuel Endowed Scholarship
- The Carl W. and Caroline D. Seyboldt Endowed Scholarship Fund
- The Mr. \& Mrs. Hugh O. Sherbert Endowed Scholarship Fund
- The Shirley Paape Scholarship Endowment
- The Vera L. Sieb Endowed Scholarship
- The Sigma Phi Epsilon Endowed Scholarship Fund
- The Sigma Tau Gamma Undergraduate Endowed Scholarship
- The Helen Slayback Memorial Endowed Scholarship
- The J. Howard Smith Endowed Scholarship
- The Fred Smoke Financial Aid Endowment
- The Carl O. Sohre Memorial Endowed Scholarship
- The John R. Sorenson Scholarship Fund
- The St. John Lutheran Church of Lombard, IL Endowed Scholarship
- The St. John's Evangelical Lutheran Church-Long Green MD Endowed
- The St. Peter Lutheran Church-Mishawaka, IN Endowed Scholarship
- The Friends of Valparaiso University, St. John's Lutheran Church
- The Edward I.P. Staede \& Amanda Hall Staede Endowed Scholarship
- The Arthur and Cecelia Stamm Endowed Scholarship Fund
- The C.V. Starr Scholarship
- The Reverend Martin Th. Steege Endowed Scholarship Fund
- The J.L. Stendel Family Memorial Fund
- The Frederick A. and Harry E. Stendell Endowed Scholarship
- The Paul Stoner Endowed Scholarship Fund
- The Jonas and Marit Store Endowed Scholarship
- The Alvin A. \& Marion S. Streder Endowed Scholarship Fund
- The Mr. \& Mrs. Herbert F. Stride Endowed Scholarship Fund
- The Fred \& Selma Strieter Memorial Endowed Music Scholarship
- The Ida S. Strieter Memorial Endowed Scholarship
- The George Strimbu Memorial Endowed Arts Scholarship Fund (PACT)
- The William R. and Georgette M. Strutz Scholarship Fund
- The Margaretta Sackville Tangerman Endowed Scholarship Fund
- The Mr. \& Mrs. Paul E. Tegge Memorial Endowed Scholarship
- The Lawrence E. Teich Endowed Scholarship
- The August and Mildred Bernthal Valparaiso University Scholarship
- The Jabs Endowed Athletic Scholarship Fund
- The Meyer Family Scholarship for Women Engineers
- The Robert D. and Renee D. Bowden Endowed Scholarship
- The Louis Thoeming Endowed Scholarship
- The John David Thomas Endowed Scholarship Fund
- The Duane D. Tiede Engineering Endowed Scholarship
- The James A. Tiemann Memorial Scholarship Fund
- The Bertha S. Tietjen Endowed Scholarship
- The Reverend Kenneth O. Timm Endowed Scholarship
- The Laura E. Traue Endowed Scholarship Fund
- The Turk Family Endowed Scholarship
- The Margot Ann Uehling Endowed Prize
- The George C. Uhlir Endowed Scholarship Fund
- The Dr. \& Mrs. H. L. Ulbrich Endowed Scholarship
- The Wilbur and Gertrude Urbin Memorial Scholarship
- The William E. Urschel Endowed Scholarship Fund
- The Valparaiso University Board of Directors Endowed Scholarship
- The Valparaiso Women's Club Endowed Scholarship Fund
- The Van Eekeren Family Endowed Scholarship Fund
- The Glenn S. and Dawn J. Vician Endowed Scholarship Fund
- The Merlyn and Judith Vocke Scholarship
- The Edward L. and Dora Voelz Endowed Scholarship
- The Theodore H. and Paula Vogel Endowed Scholarship Fund
- The Otto E. and Clara Wachholz Endowed Scholarship
- The F. G. Walker Endowed Scholarship
- The David J. Walton Endowed Scholarship
- The Lois Hamann Wampler Endowed Scholarship in Music Fund
- The Frances Tilton Weaver Law Endowed Scholarship
- The Wehrenberg Endowed Scholarship
- The Dr. and Mrs. J. Frederic Wenchel Memorial Endowed Scholarship
- The Walter G. Wendland Endowed Scholarship
- The Clara and Spencer Werner Law Endowed Scholarship Fund
- The Clara and Spencer Werner Endowed Scholarship Fund
- The Mr. \& Mrs. L.W. Werner Endowed Scholarship
- The Janet G. Wesemann Student Loan Fund
- The Wilbur \& Donald Dopp Scholarship
- The Rolland M. Wilkening Music Scholarship Endowment
- The Edith M. Will Endowed Scholarship
- The Ortherine Wilson Endowed Scholarship Fund
- The Herman M. and Christina S. Wisch Endowed Scholarship
- The Wisconsin Endowed Merit Award
- The Mathew Witter Memorial Endowed Scholarship Fund
- The Charles W. Wolf Scholarship Endowment Fund
- The Mathilda E. Wolff Memorial Endowed Scholarship
- The Erwin and Delma Woller Engineering Endowed Scholarship
- The Gilbert \& Vivian Wolter Endowed Scholarship Fund
- The Beverly Wolter Endowed Journalism Scholarship Fund
- The Doane and Euince Dahl Wright Scholarship Fund
- The Zaborsky Endowment for Social Work
- The Zahn Award and Lectureship Fund
- The Dr. Joyce R. Zastrow Scholarship in Vocal Music
- The Darrell Zimmerman Athletic Endowed Scholarship Fund
- The Zion Lutheran Church Endowed Scholarship of Kalamazoo, MI
- The Zuehlke Endowed Scholarship Fund


## University Personnel

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## Full-Time Faculty, 2016-2017

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## Course Abbreviations

Below is an alphabetized list of course prefixes that are currently used on student records followed by the department or program referenced. Course descriptions may be found in the department or program text. See the Index or Graduate Catalog for further reference.

| ACC | Accounting |
| :---: | :---: |
| ACRS | Actuarial Science |
| AE | Arts and Entertainment Administration (graduate only) |
| AERO | Aeronautical Principles (graduate only) |
| AMST | American Studies |
| ART | Art |
| AS | Aerospace Studies (ROTC) |
| ASTR | Astronomy |
| AVN | Aviation |
| BE | Bioengineering |
| BIO | Biology |
| BLAW | Business Law |
| BUS | General Business |
| CC | Christ College (Honors College) |
| CE | Civil Engineering |
| CHEM | Chemistry |
| CHST | Chinese Studies (graduate only) |
| CLC | Classical Civilization |
| COMM | Communication |
| CORE | The Valpo Core |
| COUN | Counseling (graduate only) |
| CPED | Cooperative Education (Arts and Sciences) |
| CS | Computer Science |
| CTED | Continuing Education |
| DATA | Data Science |
| EAST | Chinese and Japanese Studies |
| ECE | Electrical and Computer Engineering |
| ECON | Economics |
| ED | Education |
| ENGL | English |
| ENVS | Environmental Studies |
| FIN | Finance |
| FLC | Chinese |
| FLF | French |
| FLGK | Greek |
| FLGR | German |
| FLH | Hebrew |
| FLJ | Japanese |
| FLL | Latin |
| FLS | Spanish |
| GE | General Engineering |
| GEO | Geography |
| GNST | Gender Studies |
| GRD | Graduate School Course (graduate only) |
| GS | General Studies |
| HADM | Health Administration (graduate only) |
| HCL | Health Care Leadership |
| HIST | History |
| HS | Health Science |


| HUED | Humane Education (graduate only) |
| :--- | :--- |
| ICP | International Commerce and Policy (graduate only) |
| IDS | Information and Decision Sciences |
| IECA | International Economics and Cultural Affairs |
| INTL | International Studies |
| IT | Information Technology (graduate only) |
| KIN | Kinesiology |
| LAW | Law (graduate only) |
| LS | Liberal Studies |
| MATH | Mathematics |
| ME | Mechanical Engineering |
| MEM | Master of Engineering Management (graduate only) |
| MET | Meteorology |
| MGT | Management |
| MKT | Marketing |
| MMA | Master of Ministry Administration (graduate only) |
| MS | Military Science (Army ROTC) |
| MUS | Music |
| NS | Natural Science |
| NSCI | Neuroscience |
| NUR | Nursing |
| PHIL | Philosophy |
| PHS | Public Health |
| PHYS | Physics |
| POLS | Political Science and International Relations |
| PSJ | Peace and Social Justice |
| PSY | Psychology |
| SOC | Sociology |
| SOCW | Social Wok |
| SPED | Special Education |
| SPSY | School Psychology (graduate only) |
| STAT | Statistics |
| THEO | Theology |

## Courses for General Education Requirements

## Cultural Diversity

| + | AAA | 900-949 | International Study Semesters Abroad (Off Campus Program only) |
| :---: | :---: | :---: | :---: |
| + | AAA | 950, 960, 965 | National Study Semesters Off Campus (Off Campus Program only) |
|  | CC | 300 | Seminar (as designated) |
|  | CC | 325 | Seminar (as designated) |
|  | CLC | 290 | (only when topic is) Topic: Cultural Diversity/Classical World, or Ancient Athletics |
|  | COMM | 291 | Topics in World Cinema |
|  | EAST | 140 | Introduction to East Asian Culture |
|  | EAST | 363 | Religions of China and Japan |
|  | ECON | 136 | The Economics of Health, Education, and Welfare |
|  | ECON | 233 | The Economics of Race and Gender |
|  | ECON | 336 | Economics of Developing Nations |
|  | ED | 470 | Diversity, Equity, and Education |
|  | ENGL | 344 | Sociolinguistics: Language Across Cultures |
|  | ENGL | 368 | Teaching of English to Speakers of Other Languages: Theory and Methods |
|  | ENGL | 369 | Teaching of English to Speakers of Other Languages: Methods and Practices |
|  | GEO | 102 | Globalization and Development |
|  | GEO | 200 | American Ethnic Geography |
|  | GEO | 274 | North American Indian on Film |
|  | GEO | 301 | Regional Geography: Latin America/Africa/Asia |
|  | GS | 200 | Study Circle on Race Relations |
|  | GS | 201 | Facilitator Training for Study Circles |
|  | GS | 202 | Study Circles: Civic Engagement |
|  | HCL | 418 | Global Health Issues |
|  | HIST | 140 | Introduction to East Asian Culture |
|  | HIST | 225 | Alternative Perspectives U.S. History |
|  | HIST | 232 | Latin American History and Society |
|  | HIST | 235 | Modern Mexico: Competing Visions of the Nation |
|  | HIST | 250 | African History and Society |
|  | HIST | 304 | European Imperialism and Colonial Experience |
|  | HIST | 329 | Revolution! Insurgence in Latin America |
|  | HIST | 333 | Latin America in the Cold War Era |
|  | HIST | 341 | Revolution and Its Roots: The Making of Modern China |
|  | HIST | 342 | Tragedy and Triumph: The Making of Modern Japan |
|  | HIST | 350 | Colonialism and Independence: Understanding Modern Africa |
|  | HIST | 355 | Modern Middle Eastern History |
|  | HS | 418 | Global Health Issues |
|  | INTL | 150 | Global Perspectives |
|  | MGT | 440 | Cross-Cultural Management |
|  | NUR | 360 | Interpersonal Service Learning in Health in Central America |
|  | NUR | 418 | Global Health Issues |
|  | PHIL | 120 | Culture, Identity, and Values |
|  | PHIL | 220 | Asian Philosophy |
|  | PHS | 418 | Global Health Issues |
|  | POLS | 110 | Introduction to Politics |
|  | POLS | 130 | Comparative Politics |
|  | POLS | 231 | Politics of Developing States |
|  | SOC | 210 | Contemporary Social Problems |
|  | SOC | 275 | Systems of Social Stratification |
|  | SOCW | 260 | Diverse Populations: Human Rights \& Justice |
|  | THEO | 317 | The World of the New Testament |
|  | THEO | 321 | Medieval Christianity: East and West |
|  | THEO | 333 | Black Theology and Black Church |


| THEO | 345 | The Church in the World |
| :--- | :--- | :--- |
| THEO | 360 | Themes in the History of Religions |
| THEO | 361 | Indian Religions and Culture |
| THEO | 362 | Islamic Religion and Culture |
| THEO | 363 | Religions of China and Japan |
| THEO | 364 | Native American Religions |
| THEO | 367 | Topics in South Asian Religions |

## Humanities: Fine and Performing Arts

| ART | 101 | Ancient to Medieval Art History |
| :---: | :---: | :---: |
| ART | 102 | Renaissance to Modern Art History |
| ART | 121 | Drawing |
| ART | 130 | Introduction to 2D and 3D Design |
| ART | 132 | Introduction to Design and Digital Media |
| ART | 151 | Ceramics |
| ART | 162 | Photography I |
| ART | 163 | Introduction to Digital Photography |
| ART | 210 | Museum Studies |
| ART | 215 | Printmaking |
| ART | 221 | Painting |
| ART | 227 | Figure Drawing |
| ART | 230 | Graphic Design I |
| ART | 251 | Sculpture |
| ART | 311 | Topics in the Theory and History of Art |
| ART | 318 | Nineteenth Century European Art |
| ART | 321 | American Art and Architecture |
| ART | 324 | Digital Video Art |
| ART | 330 | Graphic Design II |
| ART | 331 | Web Design |
| ART | 387 | Motion Graphics |
| CC | 205 | Word and Image |
| CC | 300 | Seminar (as designated) |
| CC | 325 | Seminar (as designated) |
| CLC | 220 | Introduction to Classical Archaeology |
| CLC | 250 | Classical Monuments in Context |
| CLC | 251 | Classical Mythology |
| COMM | 230 | Graphic Design I |
| COMM | 270 | Introduction to Cinema |
| COMM | 271 | Cinema Production |
| COMM | 291 | Topics in World Cinema |
| COMM | 330 | Graphic Design II |
| COMM | 331 | Web Design |
| EAST | 395 | Chinese Culture and Civilization (Off Campus Program only) |
| ENGL | 201 | Introduction to Creative Writing |
| ENGL | 270 | Introduction to Cinema |
| ENGL | 321 | Intermediate Composition |
| ENGL | 323 | Short Story Writing |
| ENGL | 324 | Poetry Writing |
| ENGL | 325 | Creative Nonfiction |
| ENGL | 431 | Advanced Composition |
| FLF | 260 | French Film Studies |
| FLF | 271 | French Play Production |
| FLGR | 260 | German Film Studies |
| FLGR | 271 | German Play Production |
| FLJ | 250 | Topics in Japanese Literature and the Fine Arts (when topic is Japanese Poetry and Calligraphy) |


| MUEN | 350 | Choirs (three credits of choir) |
| :--- | :--- | :--- |
| MUEN | 352 | Bands (three credits of band) |
| MUEN | 354 | Orchestra (three credits of orchestra) |
| MUS | 101 | Introduction to Music |
| MUS | 318 | Music of Baroque, Classical and Early Romantic Eras |
| MUS | 319 | Music of the Late Romantic and Modern Eras |
| MUS | 473 | Church Music and Liturgical Theology |
| THEO | 456 | Church Music and Liturgical Theology |
| THTR | 101 | Introduction to Theatre |
| THTR | 130 | Theatre Practicum: Stage Management (three credits from three different sections) |
| THTR | 131 | Theatre Practicum: Scenery and Lighting (three credits from three different sections) |
| THTR | 132 | Theatre Practicum: Costume and Makeup (three credits from three different sections) |
| THTR | 133 | Theatre Practicum: Performance (three credits from three different sections) |
| THTR | 230 | Costume and Makeup |
| THTR | 231 | Scenery and Lighting |
| THTR | 232 | Educational Outreach Theatre |
| THTR | 235 | Acting I |
| THTR | 238 | Theatre and Culture I |
| THTR | 239 | Theatre and Culture II |
| THTR | 252 | Writing for the Stage and Screen |
| THTR | 289 | Dance Styles and Techniques |
| THTR | 292 | Ballet Technique I |
| THTR | 293 | Modern Technique I |
| THTR | 294 | Jazz Technique I |
| THTR | 295 | Lyrical Jazz Technique I |
| THTR | 296 | Tap Technique I |
| THTR | 297 | Musical Theatre Dance |
| THTR | 298 | Dance Composition |
| THTR | 337 | American Theatre |
| THTR | 392 | Ballet Technique II |
| THTR | 393 | Modern Technique II |
| THTR | 394 | Jazz Technique II |
| THTR | 395 | Lyrical Jazz Technique II |
| THTR | 396 | Tap Technique II |
|  |  |  |

## Humanities: History

Any 3-credit course in History (HIST)
CLC 310 Greek Civilization
CLC 311 Roman Civilization

## Humanities: Literature

| CLC | 200 | Classical Literary Studies |
| :--- | :--- | :--- |
| ENGL | 200 | Literary Studies |
| FLF | 200 | French and Francophone Literary Studies |
| FLF | 220 | Approaches to French Literature |
| FLGR | 200 | German Literary Studies |
| FLGR | 220 | Approaches to German Studies |
| FL | 200 | Japanese Literary Studies |
| FLS | 200 | Hispanic Literary Studies |
| FLS | 220 | Selected Readings in Hispanic Literature |

Humanities: Philosophy
Any 3-credit course in Philosophy (PHIL) except PHIL 145 or PHIL 245

| CC | 110 | Texts and Contexts I: Traditions of Human Thought |
| :--- | :--- | :--- |
| CC | 300 | Seminar (as designated) |
| CHEM | 490 | The Scientific Endeavor (when cross-listed with CC 300) |
| NS | 490 | The Scientific Endeavor (when cross-listed with CC 300) |
| PHYS | 490 | The Scientific Endeavor (when cross-listed with CC 300) |
| THEO | 335 | Philosophy of Religion |
| THEO | 341 | Bioethics |

Social Sciences
A 3-credit course from Economics (ECON)
A 3-credit course from Political Science and International Relations (POLS)
A 3-credit course from Sociology (SOC)
CC 115 Texts and Contexts II: Traditions of Human Thought
CC 255 Interpretation: Self, Culture, and Society
CC $300 \quad$ Seminar (as designated)
CC 325 Seminar (as designated)
ED 206 School and Society
ENGL 344 Sociolinguistics: Language Across Cultures
GEO 101 World Human Geography
GEO 102 Globalization and Development
GEO 200 American Ethnic Geography
GEO 201 Economic Geography
GEO 274 North American Indian on Film
GEO 280 Geography of Cyberspace
GEO 301 Regional Geographies of the World
GEO 320 Urban Geography
GEO $321 \quad$ Urban and Regional Planning
GEO 420 Rural Geography
GEO 470 Political Geography
GEO 474 Historical Geography of the United States
GEO 475 Culture, Nature, Landscape
GNST 201 Introduction to Gender Studies
PSJ 201 Principles of Peace and Social Justice
SOCW 210 Social Welfare: Policy and Services
SOCW 220 Human Behavior and Social Environment
SOCW 260 Diverse Populations: Human Rights \& Justice

Natural Science

| ASTR | $101 / 101 \mathrm{~L}$ | Astronomy |
| :--- | :--- | :--- |
| ASTR | $252 / 101 \mathrm{~L}$ | Introduction to Stellar Astrophysics |
| ASTR | $253 / 101 \mathrm{~L}$ | Introduction to Galactic Astrophysics and Cosmology |
| BIO | 125 | Biotechnology |
| BIO | 151 | Human Anatomy and Physiology I |
| BIO | 152 | Human Anatomy and Physiology II |
| BIO | 171 | Unity of Life |
| BIO | 172 | Diversity of Life |
| BIO | 270 | Genetics and Genome Evolution |
| CHEM | 111 | Introduction to Chemistry |
| CHEM | 121 | General Chemistry I |
| CHEM | 122 | General Chemistry II |
| CHEM | 131 | General Chemistry I Honors |


| CHEM | 132 | General Chemistry II - Honors |
| :--- | :--- | :--- |
| GEO | 104 | Introduction to Geomorphology |
| MET | 103 | Introduction to Meteorology |
| MET | 190 | Topics in Weather and Climate |
| NS | 101 | Introduction to Forensic Science |
| NS | 102 | Science of the Indiana Dunes |
| NS | 103 | Practical Stream Stewardship |
| NS | 104 | Principles of Evolution |
| NS | 105 | Discovering Insects: Pests or Pals? |
| PHYS | $111 / 111$ L | Essentials of Physics |
| PHYS | $112 / 112$ L | Essentials of Physics |
| PHYS | $141 / 141$ L | Newtonian Mechanics |
| PHYS | $142 / 142$ L | Physics: Electricity, Magnetism, and Waves |
| PHYS | $151 / 141$ L | Newtonian Mechanics-Honors |
| PHYS | $152 / 142$ L | Physics: Electricity, Magnetism, and Waves-Honors |
| PSY | $110 / 111$ | General Psychology |

## Quantitative Analysis

Please refer to degree requirement descriptions for details. Some degrees require specific courses from this list.

| CS | 115 | Computers and Computation |
| :--- | :--- | :--- |
| MATH | 120 | Mathematics in Modern Society |
| MATH | 122 | Applied Calculus |
| MATH | 124 | Finite Mathematics |
| MATH | 131 | Calculus I |
| PHIL | 145 | Elementary Logic and Critical Thinking |
| PHIL | 245 | Formal Logic and Critical Thinking |
| POLS | 210 | Research Methods in Political Science |
| PSY | 201 | Statistical Methods |
| STAT | 140 | General Statistics |
| STAT | 240 | Statistical Analysis |

## Writing Intensive Courses

Specific sections of the courses below may be used to fulfill this requirement.

| CC | 215 | The Christian Tradition |
| :--- | :--- | :--- |
| ENGL | 200 | Literary Studies |
| ENGL | 203 | Middle Eastern Literatures |
| ENGL | 204 | Middle Eastern Cinemas |
| ENGL | 210 | Introduction to Business and Professional Writing |
| FLF | 220 | Approaches to French Literature |
| FLS | 220 | Selected Readings in Hispanic Literature |
| MATH | 120 | Mathematics in Modern Society |
| MUS | 390 | Topics in Music |
| THEO | 200 | The Christian Tradition |
| THEO | 333 | Black Theology and Black Church |
| THEO | 364 | Native American Religions |

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# VALPARAISO UNIVERSITY 

Location: Valparaiso, Indiana--Population 32,000
45 Miles Southeast of Chicago; 13 Miles South of Lake Michigan
Campus Size: 350 Acres, 60 Buildings
Control: Independent
Religious Affiliation: Lutheran
Major Academic Divisions (Approximate Enrollments, Fall 2016)

College of Arts and Sciences-1690
College of Nursing and Health Professions-560

College of Business-500
Christ College (Honors)-330
Law School-350

College of Engineering-550
Graduate School-790

## Accreditation

The Higher Learning Commission (All Programs) 230 South LaSalle Street, Suite 7-500, Chicago, IL, 60604-1411; Tel: 800-621-7440; Fax: 312-263-7462; www.hlcommission.org

## The American Chemical Society

1155 Sixteenth St. NW, Washington, DC, 20036; Tel: 800-333-9511 (US and Canada) or 614-447-3776 (outside North America); www.acs.org

## Council for the Accreditation of Educator Preparation

1140 19 ${ }^{\text {th }}$ Street NW, Suite 400, Washington, DC, 20036; Tel: 202-223-0077; www.caepnet.org

## Indiana Department of Education

115 West Washington Street, South Tower, Suite 600, Indianapolis, IN, 46204; Tel: 317-232-6610; www.doe.in.gov

## National Association of Schools of Music

11250 Roger Bacon Drive, Suite 21, Reston, VA, 20190; Tel: 703-437-0700; Fax: 703-437-6312; nasm.arts-accredit.org
The Council on Social Work Education
1701 Duke Street, Suite 200, Alexandria, VA, 22314; Tel: 703-683-8080; Fax: 703-683-8099; www.cswe.org

## AACSB International

777 South Harbour Island Boulevard, Suite 750, Tampa, FL 33602; Tel: 813-769-6500; Fax: 813-769-6559; www.aacsb.edu
ABET
415 North Charles Street, Baltimore, MD, 21201; Tel: 410-347-7700; www.abet.org

## Indiana State Board of Nursing

402 W. Washington St., Room W072, Indianapolis, IN, 46204; Tel: 317-234-2043; Fax: 317-233-4236; www.in.gov/pla/nursing.htm
Commission on Collegiate Nursing Education
One Dupont Circle, NW, Suite 530, Washington, DC, 20036-1120; Tel: 202-887-6791; Fax: 202-887-8476; www.aacn.nche.edu/ccne-accreditation
The Association of American Law Schools
1614 20 $^{\text {th }}$ Street NW, Washington, DC, 20009-1001; Tel: 202-296-8851; Fax: 202-296-8869; www.aals.org

## The American Bar Association

321 North Clark Street, Chicago, IL, 60654; Tel: 312-988-5000; www.americanbar.org
Council for Accreditation of Counseling and Related Educational Programs
1001 North Fairfax Street, Suite 510, Alexandria, VA, 22314; Tel: 703-535-5990; Fax: 703-739-6209; www.cacrep.org

## Major Affiliations

The American Association of Colleges of Nursing
The American Council on Education
The American School of Classical Studies at Athens
The American Schools of Oriental Research
The American Society for Engineering Education
The New American Colleges and Universities
The Association of American Colleges and Universities
The Association of Graduate Liberal Studies Programs
The Center for Research Libraries
The Council of Applied Masters Programs in Psychology
The Lutheran Education Association
The Association of Governing Boards
The Council of Independent Colleges
The National Association of Independent Colleges and Universities
The Lutheran Educational Conference of North America
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[^0]:    ${ }^{1}$ Students may not take both MET 240 and MET 440 to fulfill this requirement

[^1]:    ${ }^{2}$ May also be used to fulfill General Education requirements, where appropriate.

[^2]:    ${ }^{3}$ Courses completed for the requirements above cannot be counted toward elective credits. Two elective courses must be 300 level or above.

[^3]:    ${ }^{4}$ Students must complete and receive a minimum grade of $C$ in Additional Required Courses in order to enroll in upper level KIN courses.

[^4]:    ${ }^{5}$ Students must complete and receive a minimum grade of $C$ in Additional Required Courses in order to enroll in upper level KIN courses.

[^5]:    ${ }^{6}$ Completion of level 303 is required.
    ${ }^{7}$ Piano ( 2 Cr .) and Guitar ( 1 Cr .); if principal instrument is piano, then Voice ( 2 Cr .) and Guitar ( 1 Cr .), which may be fulfilled either by 1 Cr . of studio guitar or MUS 236, Guitar Methods.

[^6]:    ${ }^{8}$ Performance study requires completion of level 203 in a primary performing area and completion of level 103 in piano or organ if primary performing area is not one of these. Up to 5 credits of performance study may be fulfilled with instructional methods courses (at 1 credit).
    ${ }^{9}$ Completion of MUAP 453 is required.
    ${ }^{10}$ Completion of MUAP 453 is required; total may include MUS 239.

[^7]:    ${ }^{11}$ May be used to fulfill General Education requirements, where appropriate.

[^8]:    ${ }^{12}$ Note that six of these credits are met through General Education requirements, (e.g. THEO 200 and a 300-level THEO course).
    ${ }^{13} 12$ credits in related disciplines that complement the student's ministry objectives.

[^9]:    ${ }^{14}$ On Sabbatical Leave, Fall Semester
    ${ }^{15}$ Deceased August 12, 2016
    ${ }^{16}$ Resigned February 15, 2017

[^10]:    ${ }^{17}$ On Sabbatical Leave, Spring Semester

[^11]:    ${ }^{18}$ On Sabbatical Leave, Fall and Spring Semesters
    ${ }^{19}$ On Sabbatical Leave, Fall Semester
    ${ }^{20}$ On Leave of Absence, Fall and Spring Semesters
    ${ }^{21}$ On Sabbatical Leave, Spring Semester

[^12]:    ${ }^{22}$ Director, University Overseas Center, Hangzhou, China, Fall Semester

[^13]:    ${ }^{23}$ On Sabbatical Leave, Fall Semester
    ${ }^{24}$ On Sabbatical Leave, Fall and Spring Semesters
    ${ }^{25}$ On Sabbatical Leave, Spring Semester

[^14]:    ${ }^{26}$ Resigned December 31, 2016
    ${ }^{27}$ Director, University Overseas Center, Reutlingen, Germany
    ${ }^{28}$ On Sabbatical Leave, Fall Semester

[^15]:    ${ }^{29}$ On Sabbatical Leave, Fall Semester
    ${ }^{30}$ Resigned December 31, 2016

[^16]:    ${ }^{32}$ On Leave of Absence, Fall and Spring Semesters
    ${ }^{33}$ On Sabbatical Leave, Fall and Spring Semesters

[^17]:    ${ }^{34}$ On Sabbatical Leave, Fall and Spring Semesters
    ${ }^{35}$ On Leave of Absence, Spring Semester
    ${ }^{36}$ Director, Overseas Center, Cambridge, England
    ${ }^{37}$ On Sabbatical Leave, Spring Semester

[^18]:    ${ }^{38}$ On Sabbatical Leave, Spring Semester

[^19]:    ${ }^{39}$ On Sabbatical Leave, Fall Semester
    ${ }^{40}$ On Sabbatical Leave, Fall Semester
    ${ }^{41}$ Resigned December 31, 2016

[^20]:    ${ }^{42}$ On Sabbatical Leave, Spring Semester
    ${ }^{43}$ Resigned December 31, 2016

[^21]:    ${ }^{44}$ Deceased April 11, 2017
    ${ }^{45}$ Deceased May 15, 2016

