



6-2000

## 2000-2001 Ursinus College Course Catalog

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# URSINUS COLLEGE

Catalog  
00-2001



# Course Catalog

## 2000–2001



*Atrium in Pfabler Hall of Science*

# URSINUS COLLEGE

PO Box 1000 • Collegeville, PA 19426-1000

(610) 409-3000

**Ursinus College Catalog**  
**published June, 2000 by:**

Ursinus College  
PO Box 1000  
Collegeville, PA 19426-1000  
(610) 409-3000

Ursinus College does not discriminate on grounds of race, color, national origin, sex, age or disability in the administration of any of its educational programs or activities or with respect to employment. Inquiries should be directed to President John Strassburger, 504 Coordinator and Title IX Coordinator.

Ursinus College complies fully with the Family Educational Rights and Privacy Act of 1974. The guidelines adopted by the college and a copy of the Act are available for inspection in the Academic Affairs Office during regular business hours.

This catalog is intended for the guidance of persons applying for or considering application for admission to Ursinus College, and to assist Ursinus students and faculty for the 2000-2001 academic year. This catalog is not a contract; it presents the requirements, offerings, information and regulations in effect at the time of publication. The college reserves the right, through its established procedures, to change any requirement or other provision at any time. Ursinus College intends to provide notice of any change, however, it is the responsibility of each individual student to become and remain aware of all applicable requirements and provisions that may apply.

**ON THE COVER:** Bomberger Hall; inset: Professor of English Patricia Schroeder reads original play by Megan Gualtieri, Class of 2000 Valedictorian.

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## Ursinus College at a Glance

**Character:** Independent liberal arts

**Founded:** 1869; coeducational since 1880

**Location:** Collegetown, Pa., 28 miles northwest of Philadelphia

**Enrollment:** 1,250 students

**Student Demography:** 48 percent men, 52 percent women; students from more than 26 states and 20 foreign countries.

**Faculty:** 91 full-time faculty, 93 percent hold Ph.D. or highest degree in field

**Student/Faculty Ratio:** 12:1

**Campus:** 165 acres, 59 buildings

**Residential character:** Almost all students live on campus in residence halls or small houses in a residential village; varied special interest housing

**Academic calendar:** Two, 15-week semesters

**Courses offered:** 23 majors, 44 minors

**Academic environment:** 14 prestigious honor societies including Phi Beta Kappa

**Student Organizations:** More than 80 clubs, organizations and interest groups

**Undergraduate Research:** Strongly encouraged; students present research at colloquia and conferences; Independent Learning Experience required

**Internships:** Every department encourages academic work experiences

**Study Abroad:** Short-term programs in Costa Rica, Italy, Mexico, Senegal and others; Affiliation with programs in 25 countries including France, Germany, Spain, England, Australia and Japan.

**Community Service:** Chaplain's Office sponsors varied opportunities including Alternative Spring Break and first-year orientation community service day

**Athletics and recreation:** NCAA Division III intercollegiate program with the Centennial Conference; Division I field hockey in Patriot League; strong participation in intramurals

**Library:** Myrin Library houses more than 200,000 volumes and 900 current periodicals, with on-line access to 6,500 research collections and 21 million volumes

**Computers:** Fully networked; residence halls and buildings are wired for computer, telephone, Internet and cable television access; first-year laptop program

**Admissions calendar:** Early decision applications due Jan. 15; regular decision applications due Feb. 15

**Financial aid:** Some 85 percent of students receive financial assistance

**After Ursinus:** Within five years of graduation, 75 percent of Ursinus graduates enter graduate and professional schools

**Web site:** <http://www.ursinus.edu>

## URSINUS COLLEGE CATALOG

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Correspondence should be directed to the appropriate administrative officer. The mailing address is Ursinus College, P.O. Box 1000, Collegeville, Pennsylvania 19426-1000.

The main College telephone number is (610) 409-3000.

The Ursinus College homepage on the World Wide Web is accessible at

<http://www.ursinus.edu>

Visitors to the College are welcome. Student guides are available by contacting the Office of Admissions, located in Corson Hall. To assure a satisfactory visit, applicants for admission should call or write for an appointment.

*The mission of Ursinus College is to enable students to become independent, responsible, and thoughtful individuals through a program of liberal education.*

*That education prepares them to live creatively and usefully, and to provide leadership for their society in an interdependent world.*

## The College

Ursinus College is a highly selective, independent, four-year liberal arts college with a tradition of academic excellence. It is one of only eight percent of U.S. colleges to possess a chapter of Phi Beta Kappa, the national academic honor society.

A leader in undergraduate research, Ursinus offers majors leading to a bachelor of arts or a bachelor of science degree in 23 major fields and 44 minor fields.

The Ursinus liberal arts education teaches students to think critically across the disciplines and emphasizes student achievement. A recent Middle States Association evaluation noted that "Ursinus College excites its students by involving them in active learning and transforming experiences. There is emphasis on close faculty interaction, made possible by many small classes and opportunities for independent study and research . . . Ursinus is a remarkable liberal arts college - student-centered, academically rigorous, ambitious, achieving, serious about students in the community - focused, in other words, on the right things . . . This focus on teaching and learning leads to a level of student-centeredness that is commendable. The high academic expectations of the college are coupled with a commitment to developing the whole student."

All departments require a capstone project. Students are encouraged to continue their research and interests during their academic career.

As a residential liberal arts college, the educational program extends beyond the classroom, as the faculty fosters students' intellectual and creative talents throughout the College experience, especially as mentors for research and internships. The Ursinus experience nurtures a sense of com-

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munity by empowering the intellect, awakening moral sensitivity and challenging students to improve society. The faculty is composed of some of the leading teacher-scholars in the country. The cornerstone of our academic program, the faculty is dedicated to teaching and scholarship.

### **Accreditation**

Ursinus is a member of the Annapolis Group and is on the approved list of the Middle States Association of Secondary Schools and Colleges, the American Association of University Women and the American Chemical Society. It is approved by the Department of Education of the Commonwealth of Pennsylvania for the certification of teachers.

## **The Campus Setting**

Ursinus' scenic, 165-acre campus is part of the rich higher educational community of the greater Philadelphia region. The attractive campus provides an ideal setting for liberal education.

Academic and social life at Ursinus College especially intersect on a graceful plaza and brick walkway linking academic buildings, residence halls and the student center. The plaza provides settings where students and faculty can pause for conversations with one another.

Ursinus students have the educational and aesthetic advantages of the Philip and Muriel Berman Museum of Art, which offers exhibitions and events for the campus community and maintains an important outdoor sculpture collection.

The campus setting is enhanced by the presence of a collection of outdoor sculpture by noted artists, provided through the generosity of Philip and Muriel Berman. A printed guide is available, complete with information about the sculptures and artists.

Notable buildings on campus include the following:

**F.W. Olin Hall**, housing the humanities program, was dedicated in 1990 and funded entirely by a grant from the F.W. Olin Foundation. It contains a 300-seat lecture hall, a 63-seat tiered classroom, a 42-seat tiered classroom, two microcomputer laboratories, a refurbished international learning center, the College's writing center, eight traditional classrooms and four seminar rooms. It houses faculty offices for the departments of English, history, modern languages, classics, and philosophy and religion.

**Wisner Center** is a major social center on campus, providing dining facilities, social lounges, an office complex for student activities, a snack bar, a game room and a multipurpose lounge. A lower lounge is a focal point for student social life, and the setting for various activities. The lobby was refurb-



bished in 1997 and includes an important bas-relief honoring the classes from the War Years. A new, two-story, spacious bookstore is part of Wismer Center. The building is named for the late Ralph F. Wismer, '05, former treasurer of the College and member of the Board of Directors.

**Myrin Library**, constructed in 1970 and totally renovated in 1988, is both a central repository of information and a comfortable setting for study. Myrin houses more than 200,000 volumes, 155,000 microforms, 17,500 audiovisual materials, and 900 current periodical subscriptions. It is a selective depository for U.S. Government documents and Pennsylvania documents. The library is connected to the Online Computer Library Center's bibliographic network, providing worldwide access to more than 6,500 research collections and over 21 million volumes. Students can take advantage of the Interlibrary Delivery Service of Pennsylvania to obtain library materials from other academic libraries throughout the region. There are study facilities for 500 persons in carrels, seminar rooms, private study rooms and lounges. During the academic year, the library is open 110 hours per week. Through terminals located in the library and in other buildings on campus, individuals can access the online catalog as well as various other databases and Internet resources. The library also houses the College's Academic Computing Center, the Pennsylvania Folklife Archives, the Ursinusiana Collection of College-related artifacts, and the offices of the Department of Education.

*Library hours, although subject to change, are: daily, 8:00 a.m. - midnight, Friday, 8 a.m. to 9 p.m.; Saturday, 9 a.m. to 9 p.m.; and Sunday, 1 p.m. to midnight.*

**Bomberger Memorial Hall** houses classrooms, and the offices of the departments of economics and business administration, anthropology and sociology, career services, campus chaplain, college communications and music. Bomberger Auditorium contains the Heefner Memorial Organ, a three-manual 62-rank organ dedicated in 1986, the gift of Mrs. Lydia V. Heefner in memory of her husband, Russell E. Heefner. Bomberger Hall is a Romanesque structure built in 1891 of Pennsylvania blue marble. The building is named for the first President of Ursinus, Dr. J. H. A. Bomberger, and was made possible by the benefactions of Robert Patterson. In 1981, the restored tower of Bomberger Hall was named Wagner Tower in honor of James E. Wagner, D.D., former president of the Evangelical & Reformed Church (1953-1961), co-president of the United Church of Christ (1957-1961), and vice president of Ursinus College (1962-1968).

**Thomas Hall** (formerly Life Science Building) was opened for use in September 1970 and completely renovated in 1991. It is named in honor of the Thomas family, long-time faithful friends of the College. It is the home of the biology and psychology departments and the following endowed laboratories:

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Levi Jay Hammond Laboratory of Comparative Anatomy, the W. Wayne Babcock Laboratory of General Biology, the Anna Heinly Schellhammer Laboratory, and the Parlee Laboratory.

**Pfahler Hall of Science** houses classrooms and laboratories for work in chemistry, physics, mathematics, computer science, and geology. A new, state-of-the-art, three-story addition was completed in 1998, and is integrated into the traditional 1932 building. The new addition contains student work spaces, and settings for faculty and students to meet, fostering collaborative teaching and learning in the sciences. Named in honor of Dr. George E. Pfahler, famed radiologist, Pfahler Hall is where Professor John Mauchly built key components of ENIAC, considered the world's first computer.

**The Philip and Muriel Berman Museum of Art** was dedicated in 1989 and is located in the original Alumni Memorial Library, built in 1921. The museum offers exhibitions and related programming focusing on an outstanding permanent collection and a variety of touring exhibitions from around the country. The Berman Museum provides a valuable cultural resource for the campus community and the surrounding region. The facilities include a multipurpose space for seminars, lectures, and films; a non-circulating art library focusing on important texts related to the collections and specific art reference volumes; three separate exhibition galleries; and complete storage and work areas. For research, the museum's library has an on-line public access catalog terminal linked to Myrin Library. Corson Hall, named in honor of the late Philip L. Corson, a member of the Board of Directors, and his wife, the late Helen Payson Corson, was dedicated in 1970. Located near the main entrance to the campus, it houses the Admissions Office and other administrative offices.

**The D.L. Helfferich Hall of Health and Physical Education** and **The William Elliott Pool** were dedicated in 1972 in honor, respectively, of the ninth president of Ursinus College and Dr. William Elliott, board member, neighbor and benefactor of the College. Construction of a new field house is underway, and Helfferich Hall is being completely renovated. It will include an area for fitness and recreation, and a 200-meter indoor track and indoor tennis courts. The physical education complex serves both men and women with three full-size basketball courts; locker rooms and team rooms; wrestling room; weight room; dance studio; classrooms; a regulation collegiate-sized swimming pool; and squash, handball courts and a gymnastics space. A sculpture of a bear (Ursinus' mascot), chiseled by Charles Sherman from the trunk of a 250-year-old sycamore tree which stood next to the end zone of the football field until 1983, is located in the lobby.

**Ritter Center for the Dramatic Arts** opened in 1980 and houses a black box theater with flexible staging, a television studio, and various auxiliary rooms. It is named in honor of Dr. Rolland A. Ritter, LL.D., '60, and his wife, Lullis M. Ritter.

Outdoor athletic and recreational facilities include **Price Field, Patterson Field, Evans Field** and **Snell Field**. Price Field, which includes the baseball diamond, soccer field, and football practice fields, is named for Dr. John Price, '05, one of the great athletes in Ursinus history. Football games and track meets take place at Patterson Field, named for the College's first benefactor, Robert Patterson. The Effie Brant Evans Hockey Field, refurbished last summer, is located at the east end of campus near Stauffer Hall. The Eleanor Frost Snell Softball Field, named after an outstanding Ursinus educator and coach, is a relatively new addition to the athletic field complex.

The college also has eight tennis courts.

**Hunsberger Woods:** A wooded, 35-acre tract that the college jointly owns with the Borough of Collegeville. It contains running trails, open space and a creek.

## Student Life

Ursinus emphasizes growth in independence and responsibility. Students are encouraged to take an active role in the life of the campus community, where there are many opportunities to contribute to group decisions, practice leadership, sort out priorities and make personal choices. Students are encouraged to sit on campus committees and in fact are included in the membership of most faculty committees. As part of the regular campus planning process, policies affecting student life are under continuous review with the goal of furthering the educational effectiveness of residence hall life, social activities, counseling and advising.

The Student Life program is administered by the Office of the Dean of Students. It includes career services, counseling and wellness, health services, international student services, leadership development, multicultural services, residence life, security, student activities and tutorial programs.

Students at Ursinus share the responsibility for maintaining the educational climate needed for learning and for personal growth. The College expects that when students decide to enroll they will abide by all the rules of the College.

### Organizations and activities

Ursinus students can organize, participate in and attend diverse cultural, educational and recreational activities on campus.

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Constitutions for all student organizations are approved by the Ursinus Student Government Association (USGA) and the faculty. Members of the faculty and administration serve these groups as advisers, and the Student Activities Office serves as a resource. The USGA has the principal responsibility for student participation in the planning and administration of student life. USGA members are elected by the student body and are advised by a member of the Office of the Dean of Students. The USGA allocates funding to campus organizations.

The Campus Activities Board (CAB) is the primary source of campus-wide programming, providing movies, dances, concerts, trips and entertainment, as well as opportunities for leadership development. In addition, film series, theatrical productions, concerts and visits by notable artists and speakers are sponsored by campus organizations and academic departments throughout the academic year.

Students are encouraged to create organizations through the Student Life office. Currently, student interest and academic organizations include the Adventure Recreation Club, The Alternative Spring Break Club, Artists Anonymous, Association of computing Machinery, Association of Latinos Motivated to Achieve (ALMA), Athletic Training Club, the Beardwood Chemical Society, Brownback-Anders Pre-Medical Society, the Biology Club, the College Democrats at Ursinus College, Eating Disorders Anonymous, the Economics Club, Escape Velocity Dance Theatre, Exercise and Sport Science club, Federation of Ursinus college Republicans, Film Society, the Gay Straight Alliance (GALA), the German Club, the Haines-Barnard Pre-Legal Society, the International Relations Club, International Student Organization, the Japanese Club, Jazz Society, Le Cercle Français (French Club), Mathematics Association of America, Men's Lacrosse Club, G. Leslie Omwake Education Club, Organization of Commuting Students, Physics Club, Psychology Club, Sankofa Umoja Nia (S.U.N.), South Asian Student Association (SASA), the Spanish Club, Students Together Against Rape, Table Tennis Association, UC Blue Skies Environmental Organization, Women's Rugby Club, Zwingli Literary Society.

Community Service clubs include Best Buddies, community Service, Norristown State Mental Hospital Volunteer Program, Student Emergency Response volunteers and America Reads.

Religious organizations include the Fellowship of Christian Athletes, the Hillel organization, the Intervarsity Christian Fellowship, the Newman Society, the Protestant chapel programming committee and the Inter-Faith Outreach.

Additionally, Greek organizations on the Ursinus campus currently include the fraternities Alpha Phi Epsilon, Beta Sigma Lambda, Chi Rho Psi, Delta

Mu Sigma, Delta Pi Sigma, Pi Omega Delta, Sigma Chi Delta and Sigma Rho Lambda. The sororities are Alpha Sigma Nu, Kappa Delta Kappa, Omega Chi, Phi Alpha Psi, Tau Sigma Gamma, and Upsilon Phi Delta. The presidents of these organizations serve on the Greek Presidents Council, the governing board for all fraternities and sororities.

### **Performing Arts**

Membership in proTheatre, the drama organization, is available to students from all disciplines. Two or more productions ranging from the classics to the avant-garde, are offered during the year.

Music organizations are varied. Faculty members in the music department advise most of the student musical organizations and provide professional musical leadership. The Meistersingers, a choral ensemble open by audition, offers concerts on and off campus, including a one-week tour each year. This past year the Meistersingers toured Austria. The Ursinus College Choir, open to all in the College community, performs varied works. Its annual presentation of Handel's Messiah is a highlight. The College Concert Band is open to everyone in the Ursinus campus community. The Jazz Ensemble is a big band that performs several concerts per year, and also is open to all members of the College community.

A student-run gospel choir rehearses weekly and sings at chapel and other events throughout the academic year.

### **Student Communications**

The Grizzly, the Ursinus newspaper, is edited and written entirely by the students, under the mentorship of a faculty adviser. The editor-in-chief, the associate editors, and the business manager are selected on the basis of merit, and the staff is selected by the editors.

The Lantern serves as an outlet for those interested in creative writing, art and photography. It is written and edited by an all-student staff under the direction of a faculty adviser. It is published twice a year.

WVOU, the student-run campus radio station, presents an eclectic blend of music, from classical to rock, and campus and world news.

### **Residence Halls**

The College offers living accommodations for most of its students, and plans to add living spaces. The residence halls and smaller houses provide a variety of sizes and programming styles. Approximately half of the resident students live in traditional residence halls, and half reside in residence houses, which range in size from five to 50 residents. These houses are renovated historic homes, and comprise the Residential Village. The most recent is Wicks House, which houses 20 honors students who must have a G.P.A. of at least 3.3 and be enrolled in a research/independent study

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course. Wicks is named in honor of the Rev. Frederick Ross Wicks, Class of 1896, and was remodeled through a gift from his daughter, Katherine Wicks Perry.

Ursinus students may apply to live in residence halls based on personal interests. Special interest houses include residence halls for students interested in writing, international and multicultural activities, service, biology, research, wellness, art and women's studies. Quiet halls, which implement a 24-hour quiet policy, are offered to men and women in both houses and large residence halls.

Other residential structures include Sprinkle Hall, on the east campus fronting Fifth Avenue, used for the Wellness Center and student housing; Beardwood, Brodbeck, Clamer, Cloake, Commonwealth, Curtis, Duryea, Hobson, Isenberg, Keigwin, Lynnewood, Marjorie T. Elliott House, Maples, Musser, Olevian, Omwake, Paisley, Reimert Complex, Schaff, Shreiner, Stauffer, Sturgis, Todd, Wilkinson, Unity, Zwingli, and several additional residence halls with Main Street addresses.

### **Room and Meals**

Students have the option to choose a 9-, 14-, or 19-meal plan. First-year students must opt for the 19-meal plan. These plans entitle students to an unlimited selection in the main dining room or to cash equivalency meals in Zack's, the campus grill and snack bar. Commuter and evening students may purchase blocks of meals. All students, faculty and staff may also purchase Zack Power, which is a declining-balance debit system for use in either the main dining room or Zack's. The main dining room features a wide variety of foods, including a salad bar. Both the main dining room and Zack's are located in Wismer Center.

### **Counseling and Wellness Services**

With the goal of promoting emotional well-being for members of the Ursinus Community, the Counseling Office assists students in addressing problems of relationships, anxiety, stress and depression. Counseling services are coordinated through the Wellness Center. The Wellness Center staff coordinates the education of students in preventative health, general wellness issues, and assists those students requiring regular medications or needing treatment for illness or injury.

Students with medical emergencies are transported by local ambulance to nearby hospitals. Twenty-four-hour, non-emergency medical care is coordinated through the Wellness Center and is available on-campus weekdays during daytime hours, and at an off-campus site during non-business hours. Students requiring regular medication, such as allergy injections, may make arrangements through the Wellness Center. The Wellness Center covers routine illnesses and gynecological services.

### **Chaplain's Office**

Ursinus College encourages its students to explore and develop their spiritual life as part of a liberal arts education. Traditionally, Ursinus has recognized diversity of expression and freedom to worship. Under the Office of the Chaplain, a number of worship opportunities in different settings are available to students. Ursinus College is independent of, but voluntarily related to, the United Church of Christ. The Office of the Chaplain also coordinates community service activities and campus religious organizations.

### **Multicultural Services**

The Director of Multicultural Services plans and coordinates services and programs for traditionally underserved student populations to help ensure the successful completion of college. Support includes, but is not limited to academic and personal counseling, social and cultural activities, and leadership development. The director also serves as adviser to minority student organizations. This office is located in the Unity House.

### **Bridge Program**

The Bridge Program is designed to ease the transition between high school and college for incoming African-American and Latino students. In addition to taking a course, Bridge participants live in the residence halls and experience life as college students. Cultural and social activities are provided as one way of acclimating students to the Ursinus and Collegeville communities.

### **Career Services**

The Career Services Office assists students in relating their educational plans to future opportunities, and in acquiring life skills essential for successful career planning and creative job hunting. Through individual career counseling and special programs, students are given the opportunity for self-assessment and career exploration, and to participate in seminars and workshops on topics related to career planning. SIGI plus, a computer-assisted guidance program, is available to students interested in learning about the career decision process. A career resources library offers information about corporations, government agencies, nonprofit organizations, specific career fields, internships, graduate schools, and general career planning and job hunting resources. Also available is a set of job announcements listing full-time, part-time and summer opportunities. Representatives from business, government, and nonprofit organizations visit the Ursinus campus throughout the academic year to interview seniors for positions available after graduation.

The Grizzly Network is made up of alumni and parents who have volunteered to share their experiences and advice with interested students, and provide contacts and internships.

## **URSINUS COLLEGE CATALOG**

Exploring Careers is a monthly newsletter advertising career seminars, graduate testing dates, special events, employment trends and recruitment visits. Job Flash is a biweekly publication listing part-time, full-time, and summer job vacancies.

### **Tutorial Services**

The Tutorial Services program, located in the Unity House, provides tutoring for Ursinus students as well coordinating students as tutors in the Ursinus community.

### **Security**

Located in the Reimert Residential Complex, the Department of Security provides 24-hour service, seven days a week. An escort service is available to all students, and the service is provided between academic buildings and residences by security officers. All security personnel participate in in-service training programs and regularly receive updated security materials.

While Ursinus College security officers cannot make arrests, they are acquainted with criminal laws and procedures. Officers have received training in basic first aid and C.P.R., and emergency medical assistance is available through the local ambulance corps. The department cooperates with the state police agency and maintains a relationship with the Collegeville Police Department, which assists as needed. Crimes involving violence, major property loss or any felony are reported by the Security Department to the Police Department. All crime statistics are reported on forms and in the format required by the Pennsylvania State Police and the Federal Crime Awareness and Campus Security Act of 1990.

## **Athletics**

For over 100 years, Ursinus College has been a leader among liberal arts colleges in combining and balancing athletics and academics. Ursinus offers unique opportunities to achieve athletic and personal goals through intercollegiate athletics, club sports and intramural programs. Whether they're playing among themselves or against another college's club team, or competing on one of Ursinus' 22 intercollegiate teams, students of all interest and ability levels discover the benefits of an active lifestyle. Over 85 percent of Ursinus students integrate some aspect of the athletic program into their lives at the College. You can achieve national recognition through intercollegiate athletics, or participate in a recreational, club, or intramural sport for the first time. Involvement at any level is encouraged.

Home to the United States Field Hockey Hall of Fame, Ursinus participates in NCAA Division I field hockey via the Patriot League. At the same time, for 20 other sports, Ursinus is a member of one of the three leading athlete-scholar conferences in the nation — the Centennial Conference (NCAA



Division III). It's athletes not only compete in national championships every year; they also go on to achieve success in every imaginable field from medicine and law to government, business and community service. Ursinus is a leader among Centennial Conference colleges in its commitment to fostering excellence on the playing field and in life.

Like the other 10 schools with whom Ursinus competes in the Centennial Conference (Bryn Mawr, Dickinson, Franklin & Marshall, Gettysburg, Haverford, Johns Hopkins, Muhlenberg, Swarthmore, Washington and Western Maryland), Ursinus place its academic program as the top priority. This philosophy brings out the best in student-athletes and allows them to reach their potential both in the classroom and on the playing fields. Athletics at Ursinus College provides the opportunity for student-athletes not only to participate in a highly competitive environment, but also to learn important lessons that they can apply in all aspects of their lives. These lessons support the mission of the College by helping to create a well-rounded individual: someone who has not only been shaped by Ursinus' academic rigors, but who also possesses a strong character that athletics has helped to develop.

The intercollegiate athletic teams at Ursinus are uncommonly competitive, winning a number of conference, regional and national championships. Ursinus College is committed to providing the resources necessary to ensure that all student-athletes experience the benefits of successful athletic competition. Such competition complements an outstanding academic program and supports and enhances an Ursinus education.

Ursinus operates in full compliance with the rules and regulations of the National Collegiate Athletic Association, the Centennial Conference and the Patriot League. Men's intercollegiate competition takes place in football, basketball, soccer, wrestling, swimming, cross country, golf, baseball, track and tennis. For women, the College supports intercollegiate competition in field hockey, basketball, softball, tennis, swimming, soccer, lacrosse, gymnastics, volleyball, cross country and track. The intramural program provides additional recreational opportunities for men and women in touch football, basketball, volleyball, soccer, softball, aerobics, and table tennis. Club programs are sponsored in men's lacrosse, sailing, bicycling, bicycle racing, badminton, cheerleading, skiing, racquetball, rugby, men's volleyball and water polo.

The College is a member of the Centennial Conference; the Pennsylvania Association for Intercollegiate Athletics for Women; the Eastern Association for Intercollegiate Athletics for Women; the Eastern Collegiate Athletics Conference; and the National Collegiate Athletic Association. These organizations govern the conduct of intercollegiate athletics at member institutions.

## Computing Resources at Ursinus College

Beginning with the class entering in the fall 2000, all students will receive IBM laptop ThinkPad computers. The college is committed to innovative uses of technology to enhance communication, community, computer learning, equal computer access and teaching & learning innovation.

A fiber optic backbone network connects all buildings on the Ursinus College campus, including all residence halls and most houses in the residential village, to provide high speed access to college computing resources and to the worldwide resources of the Internet. Novell, Unix and VAX applications servers and a sophisticated system of communications hubs, switches and routers support the campus wide network. Five instructional and general purpose computing labs with Pentium and Macintosh workstations are located throughout the campus and seventeen special purpose work areas and labs are equipped with Macintosh, Pentium and Unix workstations for use in specific courses and disciplines. There are also computers available for use in the residence halls. These computers have access to general purpose software packages, course and discipline specific software packages and programming languages, the on-line holdings catalog of the Ursinus College library and a variety of other resources such as those on the college's web site and on the Internet. With over 260 computers available for use by students, the ratio of students to computers at Ursinus College is among the best to be found in any college or university in the country. Many students also choose to bring their own computers to campus and thirty percent of students in residence have computers in their rooms. The College has a program to install and configure network hardware and software in students' personal computers so that they can establish direct connections to the campus network and to the Internet. Computing and information technologies are used at Ursinus College to support and enhance the teaching and learning process and to provide faculty and students with tools that can enrich the college's program of liberal education.

## College History

The College history dates back two centuries to a log schoolhouse and the former Freeland Seminary. The College's founders named the College for the distinguished 16th-century Reformation scholar Zacharias Ursinus of the University of Heidelberg, Germany. A state charter was granted in 1869, and women were first admitted to the Collège in 1880. Ursinus' rich legacy includes a historical relationship with the United Church of Christ.

Today Ursinus enrolls some 1,250 full-time students of varied backgrounds, about equally divided between men and women. Traditional full-time stu-

dents are required to live in the residence halls if not living with parents, unless there is an exceptional circumstance.

## Other Programs

### **Center for Continuous Learning**

Since 1952, Ursinus has extended its outreach to nontraditional students by means of a continuing education program that is in harmony with the College's mission of liberal education. Both single college courses and entire degree programs are available for those who are unable to pursue academic goals during traditional daytime hours.

Evening programs enable a student to complete 128 semester hours of coursework leading to a bachelor's degree; complete coursework leading to a post-baccalaureate Certificate of Professional Studies or Secondary Teacher Certification; select individual courses of special interest; complete coursework leading to a Master of Business Administration degree or a Master of Science in Health Administration in conjunction with St. Joseph's University.

For information about credit and noncredit evening programs, consult the Center for Continuous Learning (See Communications with Ursinus College).



*F. W. Olin Hall for the humanities*

## Admission

The Ursinus College admissions process is highly personal. Students are encouraged to supplement our application with additional information that more fully describes the person beyond the transcript. All material will be carefully read by the admission staff. Personal essays, teacher recommendations, visit and interview at Ursinus are important in our decision.

The application process for Ursinus should start with a visit to the campus. The visit should take place any time from the spring of the junior year to February 15 of the Senior year in High School. Tours and interviews are available Monday through Friday 9:00 a.m. - 4:00 p.m. Appointments should be made at least one week in advance by calling the Admissions Office.

Ursinus College is a member of the National Association of College Admission Counselors and subscribes to its Statement of Principles of Good Practice. The first step in seeking admission to Ursinus College is to file an application. The Admissions Office will supply forms for this purpose to all who request them. Each completed application must be accompanied by a \$40 application fee. The applicant must be recommended by two teachers and the high school guidance office, and must request that an official transcript of his or her secondary school records be sent to the College by the secondary institution. Further, it is the responsibility of the candidate to make arrangements to take the Scholastic Assessment Test I of the College Board and to have the official test results sent to the Director of Admissions. A personal interview is strongly recommended; the arrangements are the responsibility of the candidate.

The deadline for applying under the Regular Decision plan is Feb. 15. Candidates for Early Decision must apply by Jan. 15 (see below for a description of the Early Decision plan.)

### Advanced Placement

Students who wish to be considered for advanced courses upon admission may submit the results of the advanced placement examinations given by the College Board. If the scores are satisfactory, the student may be advanced beyond the basic course and credit may be given toward the degree. Certain courses offer no advanced placement; therefore, it is suggested that a candidate consult the admissions office if any question arises. After acceptance for degree standing, a student who wishes to receive transfer credits must receive written permission from the dean of the College or the vice president for enrollment to take a course at another college.

## URSINUS COLLEGE CATALOG

### **Early Decision**

The College offers a program of early decision to those students for whom Ursinus College is their first choice. The procedure for making application under the Early Decision plan is the same as outlined above. However, candidates applying under the Early Decision plan have chosen Ursinus College as their first choice and, if admitted, their commitment to attend is binding. Admitted candidates must withdraw all other college applications. Admission decisions are deferred until Regular Decision for those students applying and not admitted under the Early Decision plan. The deadline for applying under the Early Decision plan is Jan. 15. Candidates will be notified of the admission decision by Feb. 1.

### **International Students**

Ursinus College is a member of the European Council of International Studies (ECIS). The College encourages international students who have successfully completed their secondary school studies to apply for admission. International students are asked to complete a preliminary application, and must take the Test of English as a Foreign Language (TOEFL) if their first language is not English. International applicants are strongly encouraged to take the SAT I. The College accepts the International Baccalaureate degree and grants advanced standing. IB students are encouraged to contact the Admissions Office for details regarding advanced standing. International students work with the Admissions Office and the Registrar to complete the necessary paperwork for obtaining student visas. Need-based Financial Aid is available for international students.

### **Junior Admission**

A limited number of outstanding high school juniors who have completed all or nearly all requirements for graduation from high school may be considered for admission. Such students will be considered only upon the strong recommendation of the guidance counselor and with the assurance that the student will receive his or her high school diploma either before or upon successful completion of the freshman year in college. Outstanding juniors may apply for admission in the late spring or during the summer preceding the senior year. An applicant must be recommended by two teachers and the high school guidance office, and must request that an official transcript of his or her secondary school records from ninth through eleventh grades be sent to the College by the secondary institution. He or she also should have junior year SAT I results sent to the Director of Admissions. We strongly recommend that all candidates take Achievement/SAT II tests. The personal interview is strongly recommended, the arrangements for which are the responsibility of the candidate.

**Notification of Admission**

When candidates for admission are notified of acceptance by the College, each must make an advance payment of \$300 in accordance with the provisions of the letter of acceptance. This payment is credited to the bill for the first term. The payment is non-refundable and forfeited if the candidate does not enroll.

**Placement in Foreign Languages**

Students who wish to take the same foreign language in college that they took in high school must take the language placement test given by the modern languages department at Ursinus. The result of this test, combined with their high school language experience, will determine the students' language placement at Ursinus.

**Readmission (see The Ursinus Plan for Liberal Studies).****Requirements**

A candidate for admission to the freshman class must be a graduate of a secondary school. If the applicant is a graduate of a four-year high school, he or she must offer for admission at least 16 units, which are to be distributed as follows:

*Basic Academic Credits (11 units):*

English, *Four years, Four units*

Elementary Mathematics (Algebra and either Geometry or PreCalculus),  
*Three Units*

Science, *One Unit*

Social Studies, *One Unit*

Foreign Language, *Two Units in One Language.*

*Additional Academic Credits (at least 2 1/2 Units)*

Calculus

Advanced Mathematics

Statistics

Computer Science

Solid Geometry

Trigonometry

Science

Social Studies

Foreign Language

*Electives (Maximum of 3 1/2 Units)*

*Not more than one unit will be granted for any single elective*

Music (history or appreciation)

Art (history or appreciation)

Studio Art

## URSINUS COLLEGE CATALOG

Candidates graduated from a three-year high school should offer at least 12 units, which must include the basic credits above. Not more than one unit may be presented from the group designated as electives. Ursinus College accepts the International Baccalaureate degree and grants advanced standing. IB students are encouraged to contact the Admissions Office for details regarding advanced standing. Applicants whose preparation does not coincide precisely with the foregoing outline may, in exceptional cases, be admitted to the College if, in the judgment of the Admissions Office, they are qualified to do college work satisfactorily.

### **Special Students**

A limited number of applicants who are not candidates for degrees may be admitted as special students, provided they have satisfactory preparation for the college courses they wish to pursue. Special students who reside at the College must register for at least 12 hours of work in each semester. They are subject to the same regulations as other students.

### **Students with Disabilities**

Ursinus College is in compliance with the Americans with Disabilities Act. Prospective students with disabilities should advise the admissions office. A counselor will discuss educational opportunities and note what reasonable accommodations might be required to succeed at the College.

### **Tests**

Candidates for admission to the freshman class are required to take the Scholastic Assessment Test. Although not required, Achievement/SAT II tests are strongly recommended, especially in English composition with essay and mathematics. Full information concerning the dates of the administration of these tests can be obtained from the high school guidance office or by writing directly to the College Board, P.O. Box 592, Princeton, N.J. 08540.

The College Board number for Ursinus College is 2931.

In addition to the SAT I, foreign applicants must take the Test of English as a Foreign Language (TOEFL) if their first language is not English.

### *SAT Score Report Option*

Reporting of the SAT score or other standardized test results of the Ursinus Admissions Office is optional if: a) your high school reports class rank and you are in the top 10 percent, or b) your high school does not report class rank and you have a 3.5 GPA or better on a 4.0 scale.

### **Transfer Students**

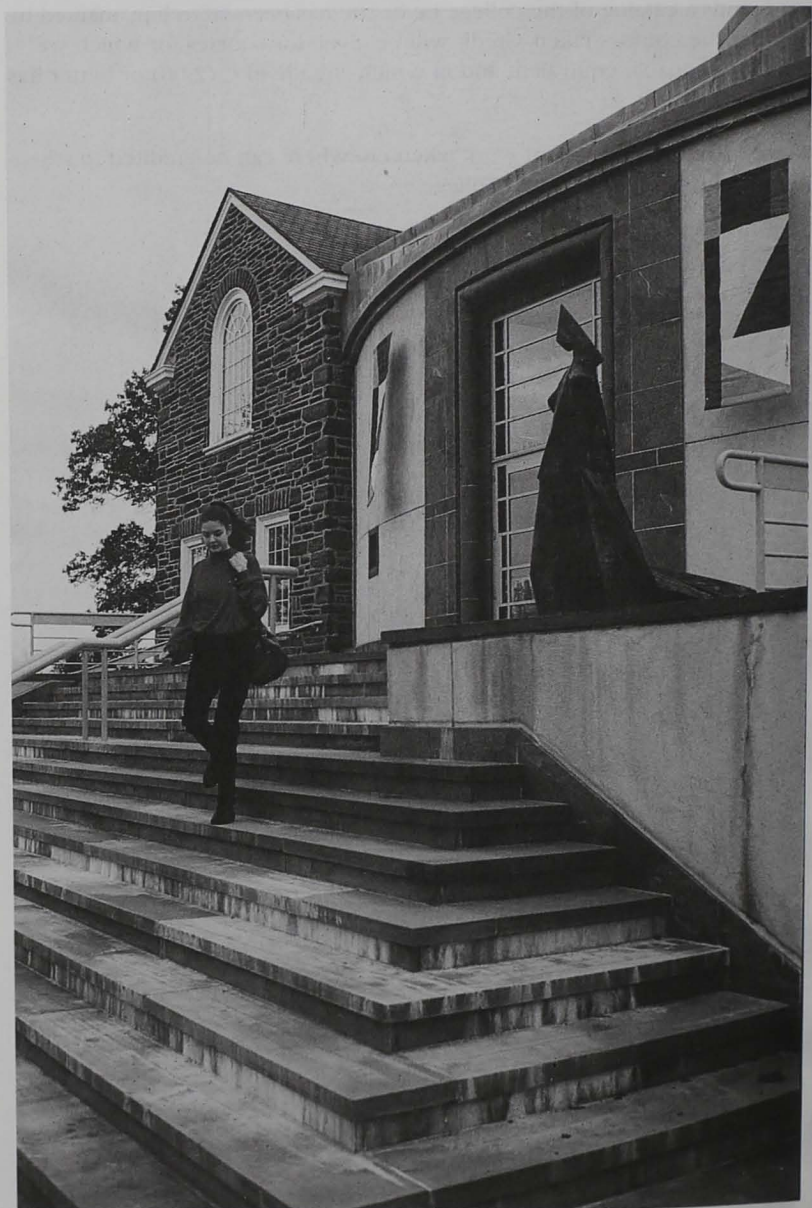
To transfer to Ursinus College, an applicant must request that each institution he or she has attended, including the secondary school, send to the vice president for enrollment a transcript of his or her academic record. In addition, recommendations from two professors and a letter of personal



## ADMISSION

clearance from the dean of students is required if the applicant has been a full-time student during the preceding year. It will be helpful if the candidate sends a catalog of the college he or she has been attending, marked to indicate the courses taken. Credit will be given for courses for which we offer a reasonable equivalent and in which a grade of C (2.00) or better has been earned.

A maximum of 64 hours of work taken elsewhere can be credited to students transferring to Ursinus College.



*The Philip and Muriel Berman Museum of Art  
on the Ursinus College campus.*

## FINANCIAL INFORMATION

### Student Charges

For 2000-2001, the following rates apply for first-year, first-time, full-time students: tuition, \$23,460; room and board, \$6,140.

For 2000-2001, the following charges apply for upperclass students: tuition, \$21,050; room and board, \$6,140; fees, \$310.

Special and part-time students are charged at the rate of \$685 per credit, hour. Part-time students registered for 12 or more credit hours will be charged full tuition.

Payments are made as follows: new students, \$300 advance payment as requested and \$250 reserve deposit as indicated on the bill. All students pay half of the annual charges in August less credit for advance payment. The second half of the charges is due in January.

A graduated late payment fee is charged each account which remains unpaid at the end of the seventh week of each semester. See the "Explanation of Charges" section.

When the student is a recipient of an Ursinus College scholarship award, credit for one-half the value of the annual award will be applied to the account for each semester bill.

For those who prefer to pay college costs on a monthly basis, the College offers a 12-month, no-interest payment plan managed by Key Education Resources, formerly Knight College Resource Group in Boston. Additionally, for those who prefer longer-term extended payments, the College makes available loan plans through Key Education Resources. Information about these programs is available through the Student Financial Services Office.

While the College makes available the payment plans noted, parents and students may choose from any available programs that provide for payment to the College as indicated on the student bill. These arrangements should be made early enough to assure payment of bills no later than the date indicated on the student bill. These arrangements should be made early enough to assure payment of bills no later than the date indicated on the billing.

The Student Financial Services Office administers a comprehensive program of aid from Federal, state, Ursinus College and other private sources. Approximately 85 percent of all students receive some form of assistance in paying tuition.

## URSINUS COLLEGE CATALOG

### **Explanation of Charges**

*Application Fee:* A fee of \$40 is paid by the candidate at the time the application is filed. This fee is not refundable and is not applied toward the student's bill.

*Advance Payment:* Upon acceptance by the College, applicants must make an advance payment of \$300 by May 1. This payment is credited on the bill for the first semester. If they fail to complete matriculation, this payment is forfeited.

Covers classroom instruction, use of libraries, gymnasium and campus facilities, and supports the programs of the Campus Activities Board. For first-year, first-time students, the fee also covers wellness, including routine physician and nursing services, both on campus and in a local physician's office, and includes the support of a wellness coordinator.

*Room and board:* Charges cover use of residence hall room and the meal plan for the period that classes are in session.

The College reserves the right to make reasonable adjustments in these fees at the beginning of any term to cover unforeseen costs.

*Student Medical Insurance Option:* An optional insurance plan is available to extend accident coverage through the summer months and purchase sickness medical expense and major medical expense benefits for a full 12 months. Students may also enroll their dependents in the optional accident and sickness plans. This insurance is mandatory for all foreign students.

*Reserve Deposit:* A deposit of \$250 is required from all full-time, and all special and part-time students enrolled for nine or more semester hours of credit. The deposit is required to defray expenses incurred through damage to College property or through fines. This is included in the bill for the first term. In order to maintain a balance of \$250 per student in the reserve deposit account at all times, students will be billed for each fine or instance of damage as it occurs. Any balance remaining will be refunded when the student graduates or withdraws from the College.

*Private Instruction in Music Fee:* A fee of \$180 per semester is charged for students taking private music instruction. The fee is for 14 half-hour lessons per semester.

*Transcript Fee:* A charge of \$2.00 is made for each transcript of a student's record after the first. Requests for transcripts should be made to the Office of the Registrar. No grade reports or transcripts will be issued if there is an unpaid balance in a student's account or if the student is in default on a student loan.

## FINANCIAL INFORMATION

*ID Card Fee:* No charge is made for the issuance of the first ID card. If the card is lost, a charge of \$5.00 will be made for its replacement.

*Late Payment Fee:* A late payment fee, as determined by the schedule below, will be applied to any balance due at the end of the seventh week of each semester. The amount charged depends upon the size of the outstanding balance.

<i>Outstanding Balance:</i>	<i>Fee:</i>
\$500.00 - 1,999.99	\$50.00
\$2,000.00 - 3,999.99	\$100.00
\$4,000.00 - 5,999.99	\$150.00
\$6,000.00-7,999.99	\$200.00
\$8,000.00-9,999.99	\$250.00
\$10,000.00 or above	\$300.00

### **Regulations**

Bills for student fees are issued approximately 30 days before the beginning of each term. A student's bill must be settled no later than the date indicated on the statement.

No student who is indebted to the College or to any of its departments or agencies will be permitted to register at the beginning of any term, and all items due the College from a candidate for graduation must be paid before the candidate may be presented for a degree.

Delinquent accounts will be placed for collection, and the College will add collection costs to the delinquent amount. The total amount will then be payable in full.

Students who are absent from College because of sickness and retain their place in class pay student fees in full during their absence, except that when the absence is continuous over a period exceeding four weeks, resident students are allowed a pro rata rebate of the dining hall charges for each full week of absence.

Changes in marital status should be reported to the College immediately.

Address changes must be reported to the College as soon as possible.

A student who voluntarily withdraws from the College must notify the dean of the College in writing and settle all bills within 30 days or be liable to dishonorable dismissal.

The College reserves the right to exclude at any time students whose conduct or academic standing renders them undesirable members of the College community, and in such cases the fees due or paid in advance to

## URSINUS COLLEGE CATALOG

the College will be refunded according to the policy shown below. Other regulations and procedures of vital concern to students are contained in the pamphlets, Ursinus College Student Handbook and the financial aid brochure.

### Refund Policy

Upon a student's dismissal or withdrawal from the College prior to the first day of class, the student will receive a full refund of monies paid, less \$300.00 to cover application, enrollment and registration charges.

Additionally, any student indebtedness to the College or to any of its departments or agencies will be deducted from any remainder due the student.

No changes in student charges are made because of changes in enrollment status after the second week of classes.

Ursinus College will refund tuition and fees to full-pay students using the table below. There is NO refund of amounts paid for dormitory rooms after the first day of classes. The refund for meal plan charges is calculated on a pro-rata basis from the official date of withdrawal or dismissal.

Week #	
1	87.5 percent
2	75.5 percent
3	62.5 percent
4	50.5 percent
5	37.5 percent
6	25.5 percent
7	12.5 percent
8	00.5 percent
9	00.5 percent
10	00.5 percent

When calculating refunds for withdrawing or dismissed students who are recipients of federal Title IV funds, Ursinus college will comply with the "Return of Title IV Funds" regulations published on Nov. 1, 1999, which are based on changes made by the Higher Education Amendments of 1998. These rules, following the basic steps found in the New Return of Funds Formula, will be implemented by the College at the start of the 2000-2001 academic year.

Examples of refund calculations are available from the Student financial Services Office upon request.

To supplement the College's refund policy, a Tuition Refund Plan is offered through A.W.G. Dewar, Inc. This plan provides for up to 100 percent refund of tuition and room and board charges should the student be forced to

## FINANCIAL INFORMATION

withdraw for medical reasons at any time during the semester. Information on the plan and the insurance premium is available through the Student Financial Services Office.

Date of withdrawal shall be the date on which the student notifies the dean of the College in writing of such action, or the date on which the College determines that the student has withdrawn, whichever is earlier. Date of dismissal shall be the date on which the College has notified the student of such action.

In the event that a student participates in the Federal Stafford Loan Program or other Title IV programs, refunds of such funds shall be made promptly, but not more than 10 days after the College receives a loan disbursement or other check, as provided under Federal Regulations.

## SCHOLARSHIPS AND FINANCIAL AID

### Student Financial Assistance

The primary mission of the Student Financial Services Office at Ursinus is to provide counseling and assistance to those students who would be unable to attend college without such aid. An application for financial aid does not hinder a student's chance for admission to the College. Awards are made without reference to ethnic origin, religion, sex, handicap or marital status.

The financial aid program assists full-time degree candidates in meeting college costs through institutional grants, scholarships, loans, and employment, as well as aid through state and federally supported grant and loan programs. (Part-time degree candidates may qualify for Federal Pell Grants, Federal Supplemental Educational Opportunity Grants, Federal Perkins Loans, state grants, Federal Work Study, Charlotte Newcombe Scholarships, or Federal Stafford Loans.) Ursinus College is pleased to offer merit scholarships and also recognizes merit awards given by outside organizations.

Financial aid may be offered in a single form or in combinations of scholarships, grants, loans, and employment. The financial aid package is based on demonstrated need as determined through federal and institutional methodology. Proven academic excellence and leadership abilities may also be considered.

### Application Procedure

All students wishing consideration for institutional financial aid must submit a Free Application for Federal Student Aid (FAFSA) and a PROFILE application, with all questions completed, no later than Feb. 15. A student who wants to be considered only for the Federal financial aid programs need only complete the FAFSA (the PROFILE is not required). All late

## **URSINUS COLLEGE CATALOG**

applications will be considered if funds are available. The FAFSA and the student's individual state application, where applicable, are the only applications required to be filed for state grant consideration. These forms must be filed for each year the student wishes to continue aid.

The Free Application for Federal Student Aid (FAFSA) and the PROFILE registration form can be obtained from secondary school guidance offices or the Ursinus College Student Financial Services Office. The Ursinus College Code is 003385 on the FAFSA and 2931 on the PROFILE. If the FAFSA and PROFILE are filed by Feb. 15, freshman and transfer students' award notices will be released by April 1. Upperclass applicants should obtain the FAFSA by January and submit it by April 1. Upperclass award notices will be sent by early July if all required documentation is received in the Student Financial Services

Office. The College requires the submission of signed parent and student Federal income tax forms, W2 forms, and the Institutional Verification Form to be considered for any aid offered by Ursinus College.

An independent (self-supporting) student must file the FAFSA and PROFILE application under the same guidelines as above. All students who enter Ursinus as dependent aid filers will remain dependent for all Ursinus funds for the entire period of enrollment. Independent students are those who are over 24 years of age; orphans or wards of the court; married; veterans; parents of dependent children; graduate students; or those determined as independent by the Student Financial Services counselor with appropriate documentation.

All students should realize that financial aid is not automatic and requires formal application for each year that aid is expected. Financial aid normally continues at the same level unless financial need deviates from prior years or federal regulations change. Full-time attendance is required for all scholarship and need-based institutional aid. International students must submit the Declaration of Finances and Application for Foreign Students, available from the Office of Admissions.

## **URSINUS COLLEGE SCHOLARSHIP AND FINANCIAL AID PROGRAMS**

Ursinus College offers an extensive financial aid program designed to recognize the high school achievements of students, while at the same time providing access to students from a wide range of economic backgrounds. That is why Ursinus awards financial aid based both on merit and financial circumstances.



The College's scholarship, grant, loan, and student employment programs will total nearly \$17 million for 2000-2001. Of the entire student body, approximately 85 percent receive some form of financial aid, whether it be through student employment, loans, college funds, or scholarships. Every student submitting the FAFSA and PROFILE will be considered automatically for all aid programs administered by the College.

### **Ursinus College Scholarships**

As part of the financial aid program at Ursinus, the College awards merit scholarships to recognize those students who by their strong high school performances have demonstrated the potential to make special contributions to our College community.

Merit scholarships are awarded in recognition of achievements which are consistent with the high ideals of the Ursinus educational mission: strong academic achievement and personal qualities which promise the potential to provide leadership and to lead lives of service, acting as worthy role models for others.

*Ursinus Scholarships:* Ursinus Scholarships are awarded to applicants who have earned the College's recognition by their academic and extracurricular achievement in high school. Ursinus Scholars are chosen on the basis of their overall high school achievement and their potential to contribute to the College community. To be eligible, candidates must apply for admission to the College and arrange for an admissions interview by February 15. Ursinus Scholars are awarded up to \$12,500 annually, renewable for four years if the student maintains a 2.67 yearly GPA and maintains standards of satisfactory academic progress.

*Steinbright Scholarships:* Ursinus College awards six full-tuition scholarships to applicants who attend high school in Berks, Bucks, Chester, Delaware, Montgomery, or Philadelphia counties in Pennsylvania. The College will award one Steinbright Scholarship in each county. Steinbright Scholarships are awarded to those outstanding students who through superior high school achievements demonstrate the greatest potential of fulfilling the Ursinus mission by becoming independent, thoughtful and inquiring adults, who will live creatively and usefully and serve society by providing leadership. To be eligible, candidates must apply for admission to the College and arrange for an admissions interview by February 15. The College will invite finalists to campus in March for individual Scholarship Committee interviews. Steinbright Scholarships are renewable for four years if the student maintains a 3.20 yearly GPA and maintains standards of satisfactory academic progress.

## URSINUS COLLEGE FINANCIAL AID PROGRAMS

*Ursinus College Fund:* Funds awarded by the College do not have to be repaid. Recipients must have demonstrated financial need each year, as determined by the results of the FAFSA and the PROFILE application, and are expected to remain in good academic and social standing.

*Charlotte Newcombe Scholarships:* This scholarship fund is supported by the Charlotte Newcombe Foundation in Princeton, N.J. Women, age 25 or above, may apply for this scholarship if one half of the required coursework towards a bachelor's degree is completed and financial need is demonstrated. Those pursuing teaching certificates and Certificates of Professional Studies will also be considered. Selections are made by a scholarship committee.

*W.W. Smith Scholar Grants and Prizes:* The W.W. Smith Charitable Trust of Newtown Square, Pa., funds a program of \$2,000 Scholar Grants to "needy and worthy, full-time" students. In addition, two top senior Scholar Grant winners receive \$5,000 W.W. Smith Prizes. Selections are made by a scholarship committee.

*Gulf Oil Loan Program:* The Gulf Oil Student Loan Fund is available to junior and senior students as an emergency fund. Recipients must be degree candidates and maintain a satisfactory academic average. The loans are at low interest with deferred repayment benefits, similar to the Federal Perkins Loan program.

*Student Employment:* The College provides students with the opportunity to earn part of their college expenses through campus employment in more than 500 positions on campus. Federal Work-Study (FWS) will be offered to eligible applicants to meet any remaining need after grant, scholarship, and loan assistance has been utilized. Priority in job placement is given to students assigned to FWS. Students not eligible for FWS will be placed on the college payroll if possible. Working just seven hours a week, a student can expect to earn about \$1,100 during the academic year. Examples of the positions available are: dining hall helper; lab assistants in biology and chemistry; library assistants; house managers in the Student Center; bookstore clerks; departmental typists; administrative clerks, and maintenance helpers. Students are employed on a contractual basis and should contact the Student Financial Services Office upon arriving on campus in the fall. Students are permitted to work a maximum of 20 hours per week.

Off-campus positions are made available by private employers, and are advertised by the Career Services Office.

### **Federal and State Programs**

*Federal Pell Grant:* This is a federal grant made available to students with exceptional financial need. Application is made by filing the Free Application for Federal Student Aid (FAFSA). Four to six weeks after filing, students receive a Student Aid Report (SAR) with a family contribution indicated. The maximum Federal Pell Grant for 1999-2000 was \$3,300.

*Federal Supplemental Educational Opportunity Grants (FSEOG):* These grants are federally funded and must be designated by the College to students with substantial financial need, primarily to those receiving Federal Pell Grant assistance. The application is made by filing the FAFSA. The average grant is \$500. The FSEOG Program is subject to change according to government regulations. Those filing the Free Application for Federal Student Aid (FAFSA) with Ursinus will be considered for this program.

*Federal Perkins Loan:* This federally funded student loan is offered to applicants with high financial need, especially when state or Federal Pell Grant assistance is negligible. Loans from \$500 to \$3,000 are awarded with the total not to exceed \$15,000 for the four years of undergraduate study. The interest rate is 5 percent. Federal Perkins Loans must be paid within 10 years after a student graduates or leaves the College for other reasons, with repayment beginning nine months after this established date. If a student continues with graduate study, repayment is deferred as long as half-time enrollment is maintained. Upon graduation, repayment begins on a normal schedule. The Federal Perkins Loan program is subject to changing Federal regulations.

*State Grant Programs:* Many states have a separate state grant application or a State Specific Financial Aid Form. Students must contact their state agency to determine what form(s) need to be filed. In Pennsylvania, students must file an FAFSA by May 1. The maximum Pennsylvania state grant for 1999-2000 was \$3,100, but is subject to change by the Pennsylvania legislature.

*Federal Subsidized Stafford Loans:* Freshmen may borrow up to \$2,625, sophomores may borrow up to \$3,500, and juniors and seniors may borrow up to \$5,500 annually for loans made on or after July 1, 1993, according to regulations in effect as of Dec. 31, 1997. The interest rate is variable, based on 91-Day T-Bill plus 3.10 percent, capped at 8.25 percent (for loans with the first disbursement made to new borrowers on or after July 1, 1994). Repayment of principal and interest is deferred until six months after graduation or withdrawal. These loans are based on financial need for all families. The loan amounts, interest rates, and eligibility rules are subject to change by the Federal government.

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*Federal Unsubsidized Stafford Loans:* Unsubsidized Stafford Loans are effective for loans made for periods of enrollment beginning on or after Oct. 1, 1992. The same terms and conditions exist as Stafford Loans, except that the borrower is responsible for interest that accrues while he or she is in school. This program is open to students who may not qualify for subsidized Stafford Loans or may qualify for only partially subsidized Stafford Loans.

### Sources of Assistance Not Based on Need

*Parent Loan for Undergraduate Students Program (PLUS):* This is a federally supported program of loans to parents of dependent undergraduate students. The maximum amount a parent may borrow for one student in an academic year is the cost of attendance less any financial aid (for loans made on or after July 1, 1993). Please note that repayment is required to begin within 60 days after the loan disbursement, unless otherwise indicated by the lender. According to regulations in effect Dec. 31, 1997, the annual interest rate is variable, based on 52-week T-Bill plus 3.10 percent, capped at 9 percent (for loans with the first disbursement made on or after July 1, 1994). Parents who have no adverse credit history are eligible for PLUS loans. Loan applications are available at local banks and other lending institutions.

*Tuition Exchange:* Ursinus College is a member of the Tuition Exchange Program. Children of employees' requests for tuition remission from schools participating in the program will be considered upon their application. Those who receive aid through the Tuition Exchange Program are not eligible for additional Ursinus College grants.

*Other Sources of Aid:* In addition to the programs described above, students should investigate other grant and scholarship programs sponsored by a variety of private organizations, including business corporations, foundations, civic clubs, and the like. High school guidance counselors usually maintain lists of the local organizations sponsoring awards for college-bound students.

### Satisfactory Progress

Colleges and universities are required to establish minimum standards of satisfactory academic progress for students receiving financial aid. Ursinus College has established these standards:

All students enrolled at Ursinus College are subject to the academic standards of the College. Qualitatively, the Committee on Academic Standards and Discipline receives the record each semester of every student with an average below 2.00. Corrective action is recommended in each case and

## FINANCIAL INFORMATION

progress is closely monitored. If the Committee sees no immediate and significant improvement, the student is determined to have failed to make satisfactory academic progress and is dismissed from the College by the faculty. All financial aid the student is receiving is terminated.

Students receiving financial aid must also meet the following quantitative requirements:

A **full-time student** (12-18 credits per semester) must successfully complete 24 semester hours of academic work in the two preceding semesters (summer academic work, where applicable, may be included) in order to be eligible to continue receiving federal, state, and institutional financial assistance.

A **three-quarter time** student (9-11 credits per semester) must successfully complete 18 semester hours of academic work in the two preceding semesters (summer academic work, where applicable, may be included) in order to be eligible to continue receiving federal, state, and institutional financial aid.

A **half-time student** (6-8 credits per semester) must successfully complete 12 semester hours of academic work in the two preceding semesters (summer academic work, where applicable, may be included) in order to be eligible to continue receiving federal, state, and institutional financial aid.

In each classification, course incompletions, course withdrawals, and non-credit remedial courses are not counted. If a student must repeat a course for major or degree requirements, it may be counted toward the annual required credits and grade average.

A **full-time student** is expected to complete all degree requirements within a maximum of 10 semesters and summer school (5 years).

### Satisfactory Academic Progress Chart

Academic Years Completed	1	2	3	4	5	6	7	8	9	10	SS
<i>Number of Credits Successfully Completed</i>											
<i>Full-time</i>	24	48	72	96	120	-	-	-	-	-	128
<i>3/4 Time</i>	18	36	54	72	90	108	126	-	-	-	128
<i>Half-time</i>	12	24	36	48	60	72	84	96	108	120	128

## URSINUS COLLEGE CATALOG

### **Special Note:**

The requirement for a bachelor's degree is 128 credits. To graduate in four years, a student must enroll for a minimum of 16 credits per semester. Enrolling for 12 credits (minimum for full-time status) extends graduation one full calendar year. Some financial aid programs have eight (8) semester limits, making financing of the fifth year possibly quite difficult.

Any student receiving financial aid who does not meet minimum satisfactory academic progress will be notified in writing by the Student Financial Services Office.

If financial aid is denied for reason of not meeting the College's standards of satisfactory academic progress, the student does have the right to appeal, in writing, first to the Student Financial Services Director and secondly to the Scholarship Committee. If the appeal is denied, the student is considered for financial aid only when he or she completes the credits needed for making normal satisfactory academic progress for all the semesters that the student had been receiving financial aid.

This evaluation of a student's academic standing and progress to determine Federal, state, and institutional financial aid eligibility is made once a year or after two semesters of academic work. Students failing to progress on schedule at the end of each initial semester are placed on probation in order to provide them an early warning.

Both deficiencies in grades or earned credits may be made up by taking summer school classes at Ursinus or courses approved by the Dean's Office to be taken at another college.

The Ursinus College Financial Aid Brochure, titled *Affordable Excellence*, provides detailed information on all programs and is available in the Admissions Office and the Student Financial Services Office.

## **Academics:**

# **THE URSINUS PLAN FOR LIBERAL STUDIES**

### **The Educational Philosophy of Ursinus College**

The mission of Ursinus College is to enable students to become independent, responsible and thoughtful individuals through a program of liberal education. That education prepares them to live creatively and usefully, and to provide leadership for their society in an interdependent world.

Liberal education is provided through an academic program that empowers the intellect, awakens moral sensitivity, and challenges students to improve society. Students gain intellectual curiosity, the capacity to think analytically, critically, and creatively, and the skill to express thoughts with logic, clarity, and grace. Further, they develop a deepened sense of human history and an understanding of who they are as persons, what they ought to do as citizens, and how they best can appreciate the diversity and ambiguity of contemporary experience.

Liberal education is more than a set of courses; it requires students to integrate insights of various academic disciplines, and to participate actively in the learning process. It takes place best among students of diverse backgrounds actively searching for meaning and purpose in their lives. In order to help students appreciate the diversity and ambiguity of their world, the College seeks to include issues of race, class, and gender across the curriculum.

### **The Liberal Studies Curriculum**

The liberal studies curriculum is grounded in the assumption that individual human beings have intrinsic value. Individuals, however, live in community with other human beings. The challenge of liberal studies is to create independence of thought and spirit while fostering awareness of community connection and obligation.

To meet this challenge, the Ursinus liberal studies curriculum has four components:

**The Core**, a broad-based common experience to give all students the communications skills, and the scientific, cultural, and historical literacy that are fundamental to a liberally educated person;

**Study in Depth** in one or more of 23 academic majors, to provide the basis for lifelong engagement in intellectual inquiry;

**Explorations**, student-initiated ventures into areas beyond one's major and core courses, to foster independence, curiosity and diversity;

**The Independent Learning Experience** prepares students to become independent, life-long learners. Each student must undertake one of the fol-

## URSINUS COLLEGE CATALOG

lowing: a) independent research or creative project; b) internship; c) study abroad; d) student teaching; e) Summer Fellow Program or a comparable summer research program.

### THE CORE

The Liberal Studies Seminar introduces first-year students to the intellectual life of the College through small, discussion-based classes that address specific topics or issues. English 100, also a first-year course, is an intensive writing workshop to improve writing skills and prepare the student for the required writing-intensive (W) course in the department of the student's major.

To sharpen intellectual discipline and promote understanding across cultures, students take two semesters of a foreign language (modern or classical; ESOL 100 may be substituted for students who are eligible.) Two courses in mathematics or science increase scientific literacy and awareness of the issues of science as they influence the individual and society. The complex relationship of the individual and society is explored also in two social science courses. Historical consciousness and cross-cultural awareness are promoted through two courses focusing on change across the centuries in the fields of philosophy, literature, or history.

### The Core Requirements

-LSS 100 Liberal Studies Seminar

-ENG 100 Composition

-Two courses of study of the same foreign language (modern or classical or ESOL 100 for eligible students)

-Two courses in mathematics or the sciences, one of which must be a laboratory course in the natural sciences, and one a quantitative (Q) course. The laboratory and Q requirements may be fulfilled by the same course. IDS-151Q may be used to fulfill both the laboratory and Q requirements.

-Two courses in different social sciences: anthropology, economics, politics, psychology, sociology. Communication Studies 105 (Mass Media and Society) may be selected as one of the courses to fulfill this requirement.

-Two courses from the historical consciousness group: one course from History 101, Philosophy 101, IDS 101 plus one course from History 102, Philosophy 102, IDS 102. The courses need not be in the same department.

For most students, the Core will comprise 10 four-credit courses, or 40 credits, representing slightly less than one-third of the 128 credits needed for graduation.

### STUDY IN DEPTH

Through study in depth, students learn the modes of inquiry of an academic discipline, develop the insight to make informed judgments among



## THE URSINUS PLAN FOR LIBERAL STUDIES

conflicting methods and interpretations, and acquire the ability to make connections among different disciplines. Study in depth is achieved by the completion of a major.

Majors include at least 32 credit hours in the major department or discipline, at least one writing-intensive (W) course, an oral presentation, and a capstone experience involving students in focused inquiry.

*The following majors have been approved by the faculty:*

Anthropology and Sociology  
Biochemistry and Molecular Biology  
Biology  
Chemistry  
Classics  
Communication Studies and Theatre  
Computer Science  
East Asian Studies  
Economics & Business Administration  
English  
Environmental Studies  
Exercise and Sport Science (ESS)  
French  
German  
History  
International Relations  
Mathematics  
Philosophy  
Philosophy and Religion  
Physics  
Politics  
Psychology  
Spanish

### **Student-Initiated Majors**

Students who complete the freshman year and whose major interests span two or more recognized academic fields, if they have a cumulative B average (3.0 or above), may arrange a specialized major which combines these two fields, such as art history, American studies, biophysics, biopsychology, chemical biology or comparative literature.

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In order to set up such a specialized major, the student and the appropriate department heads, in consultation with other department members, must draw up a written statement of all courses and additional major requirements, which may include a comprehensive or an oral examination by members of both departments at the end of the program of studies. This proposed course of studies must then be submitted to the dean of the College, whose approval is needed.

Upon successful completion of the major requirements so specified, the student will graduate in the subject field specified on the program proposal.

### Minors

Students have the opportunity to develop a secondary academic specialty by developing a minor concentration. *The following minor concentrations have been approved by the faculty:*

Accounting	Greek
American Studies	History
Anthropology	Human Behavioral Development
Art	International Relations
Art History	Latin
Astronomy	Latin American Studies
Biochemistry	Mathematics
Biology	Music
Biostatistics	Neuroscience
Business Administration	Pennsylvania German Studies
Chemistry	Philosophy
Coaching	Physics
Communication Studies	Politics
Computer Science	Psychology
Creative Writing	Religion
East Asian Studies	Secondary Education
Economics	Sociology
Elementary Education	Spanish
English	Statistics
Environmental Studies	Theater
French	Wellness/Fitness
German	Women's Studies

Students who have interests spanning more than one department may design individual minors in consultation with the chairpersons of the involved departments.

### **EXPLORATIONS**

Because liberal education is a broadening experience, the curriculum allows students the opportunity for exploration and reflection in areas outside of their major. To foster independence and intellectual curiosity, students are required to take 12 credits that are outside the major department and that are not used to fulfill major or core requirements.

Students are especially encouraged to explore creativity and aesthetic awareness through courses in art, music, literature, and theater; to build healthier lives through courses in the exercise and sport science; and to prepare for a lifetime of public speaking challenges through communications studies.

### **INDEPENDENT LEARNING EXPERIENCE (ILE)**

A major academic goal of a liberal arts education is to transform students in meaningful and positive ways. Our mission statement describes specifically the goal of enabling students "to become independent, responsible and thoughtful individuals." The Independent Learning Experiences (ILE) will help students take responsibility for their education, and foster student initiative and independence by enhancing their confidence in their own abilities.

The ILE requirement is fulfilled by a completion of a single project of at least three credits in a single semester or summer in one of these categories: (a) an independent research project or a creative project (including but not limited to honors); (b) an internship; (c) approved study abroad programs; (d) student teaching; or (e) a project in the Summer Fellow Program or a comparable summer research program.

### **Foreign Language Integration Option (FL)**

This program allows students to use their language abilities in courses outside the language departments. Faculty members in the disciplines who wish to make their courses available for the foreign language integration option decide, in conjunction with individual students and in consultation with a member of the modern or classical language departments, on the amount and type of language work involved. This work typically includes readings from books, newspapers or articles, or paper writing, and it substitutes for English language work.

### **REQUIREMENTS FOR GRADUATION**

The requirements for the degree of Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) are:

- (1) the completion of 128 semester hours, and all the courses required by the faculty, including the courses required for a major; and
- (2) a GPA of C (2.00) or above for all courses taken at Ursinus College.

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To qualify for the degree of Bachelor of Arts or Bachelor of Science, a student must have successfully completed a minimum of 64 semester hours of credit at Ursinus. Half of the semester hours of credits required in the major department must be taken at Ursinus; exceptions may be granted by the dean of the College. A degree from the College requires that a student spend the two semesters of the senior year as a full-time student (this regulation does not apply to students receiving a degree from the Center for Continuous Learning.)

A full-time student may not take fewer than 12 semester hours per semester. The normal load for a term is 16-18 credits. It is recommended that students normally take no more than 16 credits per semester. Students may register for up to 18 credits with the approval of their advisers. They may not register for more than 18 credits in any semester without special permission from the dean of the College. Students carrying fewer than 12 hours are not permitted to remain or to become residents of College residence halls.

All requirements for graduation must be satisfied before the end of the last day of examination week preceding commencement. Each student must bear responsibility for fulfilling the requirements for graduation.

### **DEGREES**

Ursinus College confers the degrees of Bachelor of Arts and Bachelor of Science. The Center for Continuous Learning at Ursinus College also confers a Bachelor of Business Administration. For specific requirements of the curricula leading to each of these degrees, see departmental requirements and the catalog of the Center for Continuous Learning. Degrees are conferred only at commencement and candidates must present themselves in person.

A student in good standing who has earned a minimum of 96 semester hours of credit and who withdraws from the College to enter an accredited graduate or professional school may, with the approval of the faculty, receive a baccalaureate degree from Ursinus after earning any doctoral degree from an accredited institution.

The College may confer the honorary degrees of Doctor of Divinity, Doctor of Humane Letters, Doctor of Pedagogy, Doctor of Science, Doctor of Letters, and Doctor of Laws on persons whose distinguished ability and service have been deemed worthy of such recognition by the faculty and the Board of Directors.

### **Second Bachelor's Degrees**

We usually recommend against students working toward a second bachelor's degree. For those who do desire a second degree, the following

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applies: Students who hold a bachelor's degree from another institution may be admitted to degree candidacy at Ursinus as transfer students. The student must satisfy all degree requirements at Ursinus, including completion of a minimum of sixty-four (64) semester hours work at Ursinus.

Students who hold a bachelor's degree from Ursinus will not be awarded a second degree of the same type (B.A., B.S., or B.B.A.). They may be admitted to candidacy in a second degree area. The student must satisfy all requirements and must complete at least thirty-two (32) additional semester hours beyond what was required for the first degree.

### HONORS

#### Dean's Honor List

All regular or full-time students achieving an average of 3.33 for a semester are announced at the end of that semester as members of the Dean's Honor List. It is an Ursinus tradition to publish at the Ursinus Day Academic Convocation the names of those students who have been carried on the Dean's Honor List for the preceding two semesters.

#### Commencement

Two commencement honors are assigned: one, the Valedictory, to the person attaining the highest standing in the graduating class; the other, the Salutatory, to the person attaining the next highest standing.

#### Graduation with Distinction

Members of the graduating class who have shown great proficiency in their study at Ursinus College may be graduated with distinction if, in the opinion of the faculty, their credentials warrant such honors. These distinctions, Summa Cum Laude, a cumulative average of 3.85 or above, Magna Cum Laude, 3.67 but less than 3.85; and Cum Laude, 3.5 but less than 3.67, are given only for unusual excellence in all subjects pursued by the candidate. Graduation honors will be calculated at the end of the fall term. If as a result of work done in the spring semester a student should merit distinction or a higher distinction, such honors will be awarded *ex post facto*.

#### Departmental and Interdepartmental Honors

The goals of the Honors Program at Ursinus College are to encourage academic excellence, to promote original research and independent study, and to reward scholarly achievement. Students with high overall academic standing who have demonstrated an exceptional competence, the capacity for independent, original research and disciplined scholarship may be awarded departmental honors or distinguished honors in the department of their major or minor fields of concentration. Students may also be awarded interdepartmental honors or distinguished honors, in which case at least one department is the department of their major or minor fields of concentration. All these awards are made subject to the following regulations:

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1. To be eligible for departmental honors or distinguished honors, students must have (a) a 3.0 cumulative average and an average of 3.3 or higher in all courses taken in the department in which they seek honors, based on the work of six semesters, or (b) a 3.3 cumulative average and an average of 3.5 or higher in the department in which they seek honors, based on the work of the last four semesters.

Students pursuing interdepartmental honors must have a 3.3 GPA or higher in each department.

Students who have attended Ursinus less than four semesters must have the same grade averages as in (b), and must obtain approval of the dean of the College. Exceptions may be made by the Academic Standards and Discipline Committee.

2. To be admitted to candidacy for departmental honors or distinguished honors, students must obtain written consent of a faculty member who will serve as the project adviser, have their candidacy certified by the chairperson of the department in which they wish to pursue honors, and have the research or individual project approved by the department.

To be admitted to candidacy for interdepartmental honors or distinguished honors, students must obtain written consent of a faculty project adviser from each department, have their candidacy certified by the chairperson of one of these departments, and have the research or individual projects approved by both departments.

3. Students must complete the two-semester sequence Research/Independent Work 491 and 492. They usually register during the spring registration period of their junior year for this sequence.

Candidates for distinguished honors must work on the project for longer than these two semesters by participating in a summer research project, by earning at least four credits in preparatory Independent Study courses during the junior year, or by completing other equivalent requirements approved by the department(s). A related research project or internship approved by the department(s) also fulfills this requirement for distinguished honors. By the end of September of the senior year, a candidate for honors or distinguished honors submits a formal proposal including a bibliography and research plan to the department(s) for approval. Near the end of the 491 course, the candidate submits a written status report and makes an oral presentation to the department(s). At that

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time the department(s) decide whether the student may continue working for distinguished honors, honors or neither.

4. The Honors Project, completed in the research/independent work courses, must demonstrate disciplined, independent and original scholarship or creativity. Distinguished Honors Projects must exhibit exceptional creativity or scholarship. If the candidates receive a passing grade, they will earn credit hours toward graduation, even though their work may not be recommended for honors.
5. An honors committee of at least three faculty members, at least two from the department(s) and at least one from outside the department(s), evaluates the project and an oral presentation, and examines the candidate by early April. This committee is chosen by the department chair(s) in consultation with the adviser(s) and the student, and it submits a written evaluation to the department chairperson(s). Departmental or interdepartmental honors will be awarded on the recommendation of this committee and the department(s), and the approval of the faculty. When the honors committee recommends a candidate for distinguished honors, an outside evaluator assesses the paper and an oral presentation. The oral presentation is followed by an examination by the outside evaluator and the department(s). The outside evaluator is chosen by the department chair(s) after consultation with the adviser(s) and other department members. Departmental or interdepartmental distinguished honors will be awarded on the recommendation of the department(s) and the outside evaluator, and the approval of the faculty.
6. Departments specify the date for the candidate to submit a completed thesis. In order that the faculty may consider the awarding of honors or distinguished honors, the candidate must deposit the completed thesis in bound form following the format established by the Myrin Library, the written recommendation of the project adviser, and approval of the department(s) and of the outside evaluator for distinguished honors in the office of the dean of the College by the Monday of the last full week of classes.

### DEPARTMENTAL HONORS

The following students were awarded departmental honors in 1998-99.

**Anthropology and Sociology:** **Ericka C. Hill**, "Comparisons of Race and Ethnicity Constructs in the United States, Mexico and Brazil," Adviser: Regina Oboler

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**Art History: Jennifer A. Zwilling**, "How Fashion Has Reflected and Affected Women's Status in Society Throughout the Twentieth Century," Adviser: Pamela Potter-Hennessey

**Biology: Karey R. Carlson**, "Mechanism of Transcriptional Activation by the Yeast STE12 Protein," Adviser: R. Keith Esch

**Biology: Snehal Gandhi**, "Analysis of an ATP Binding Cassete-Enclosing Gene Fragment from Halobacterium cutirubrum and Construction of Cosmid Libraries," Adviser: Anthony Lobo

**Biology: Danielle Letting**, "Fundulus diaphanus is the maternal parent of the clonal hybrid Fundulus heteroclitus-diaphanus," Adviser: Kathryn Goddard

**Biology: John Sears**, "Characterization of the Halophage HP2 Receptor of Halorubrum coriense," Adviser: Anthony Lobo

**Biology: Devon Shedlock**, "The Effects of Salt, pH, Light and Various Sugars on the Infectability of the Extremely Halophilic Archaeon Halorubrum coriense by its Phage HF2," Adviser: Anthony Lobo

**Biology: Lauren Wagman**, "The Effects of Increased or Reduced Myocardial Taurine Levels on the Response of the Myocardium to Ischemia/Reperfusion Injury," Adviser: Beth Bailey

**Biology: Russell Whelan**, "The Effects of Varying Amounts of Ischemic Preconditioning on Postischemic Recovery in the Murine Heart," Adviser: Beth Bailey

**Chemistry: Kimberly N. Algayer**, "Characterization of a Nucleosil C18 and a FluoroOctyl Phase for HPLC Stationary," Adviser: Eric J. Williamsen

**Chemistry: Christine Kenny**, "The Synthesis and Characterization of Novel Stationary Phases for HPLC," Adviser: Eric J. Williamsen

**Chemistry: Danielle Lann**, "The Characterization and Comparison of C18 and Novel Stationary Phases for HPLC," Adviser: Eric J. Williamsen

**Chemistry: Thomas Malia**, "Determination of the Distribution of Ethanol in Model Membranes," Adviser: Holly C. Gaede

**Chemistry: Kelly Much**, "Models for the Separation of Polyaromatic Hydrocarbons on Structurally Similar, Liquid Crystal and Non-Liquid Crystal HPLC Stationary Phases," Adviser: Eric J. Williamsen

**Chemistry: John E. Shilling**, "Optically Polarized  $^{129}\text{Xe}$  Studies in Solution," Adviser: Holly C. Gaede



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**Communications Studies & Theatre: Melissa Forbes,\*** "The Decision to Express in Friendships," Adviser: Sheryl Baratz Goodman

**East Asian Studies: Andrew M. Paparella,\*** "Wo-K'ou Phenomenon: Piracy and Smuggling in the Overseas Trade Networks of East Asia during the Later Ming Dynasty," Adviser: Hugh Clark

**EcBA: Amy Brown,** "Forensic Accounting: Detection and Prevention of Fraud," Adviser: Cindy Harris

**EcBA: Daniel J. Gedrich,** "The Determinants of Retention of First Year Versus Second Year Students at Ursinus College," Adviser: Heather O'Neill

**EcBA: Amanda Hektor,** "An Institutional Analysis of Indonesia's Economic Development," Adviser: Andrew Economopoulos

**ESS: Laurie C. Barilotti,** "Resurgence of the Labyrinth: Modern Day Applications," Adviser: Laura Borsdorf

**ESS: Sean C. McCoy,** "The Biomechanical and Physiological Analysis of the PreCpr EFX546 Elliptical Exercise Device at Various Ramp and Resistance Settings," Adviser: Pamela Chlad

**French: Susan Pauley,\*** "The Life of Evariste Galois by Monsieur Paul Dupuy," Adviser: Frances Novack

**German: Kimberly N. Algayer,** "Die lange lange Strabe lang: Wolfgang Borchert und Verzweiflung in dem Leben der Zivilisten und Soldaten nach dem Zweiten Weltkrieg," Adviser: Lynn Thelen

**German: Jeevan Sekhar,** "Der Existentialismus und Max Frisch: Die Beziehung Zwischen dem Roman Homo faber und Albert Camus, Martin Heidegger und Jean-Paul Sartre," Adviser: Robin Clouser

**History: Joanna Doyle,\*** "Life through Learning: Education and Spiritual Resistance in Jewish Ghettos," Adviser: S. Ross Doughty

**History: Melissa Grafe,** "Women's Advice Literature from 1830-1860: Interpreting Women's Sphere," Adviser: Dallett Hemphill

**History: George Z. Hankins,** "Intercollegiate Soccer 1901-1976: A Study of How and Why the Game Has Grown, Changed, and Been Refined," Advisers: William Akin, Daniel Aldridge

**History: David Tam,** "The Great Proletarian Cultural Revolution," Adviser: Hugh Clark

**History: Michael Traud,** "Legal Culture in Antebellum America," Adviser: Dallett Hemphill

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**Politics: Ryan Costello**, "Generation X and Our Political Culture," Adviser: Gerard Fitzpatrick

**Politics: Jodie M. Poth**, "Watergate versus Iran-Contra: Views as to why one scandal is remembered and the other is not," Adviser: Nicholas Berry

**Politics: Mary Ann Robbins**, "Argentina and the Failure of Modernization Theory," Adviser: Stephen Hood

**Psychology: Brandace McLachlan**, \* "Young Children's Perceptions of a Delay of Gratification Situation: Punishment and Reward Characteristics of Adult Authority Figures," Adviser: Eileen England

**Psychology: Laura K. Thomas**, "Attitudes Toward Women and Maternal Employment: A Cross-cultural and Cross-generational Comparison," Adviser: Catherine Chambliss

**Spanish: Francine Cunniffe**, "Un estudio linguistico del castellano del siglo XVII Shirley Eaton," Adviser: Frances Novack

**Spanish: Christine Kenny**, "De la oralidad a las escrituras: La transformacion del indigenismo en Oficio de tinieblas y en El hablador," Adviser: Doug Cameron

**Spanish: Janine Soper**, "Los sistemas de interferencias en el Museo Guggenheim Bilbao de Gehry: la curva, la cuadrícula y las narrativas conflictivas en el contexto de Bilbao," Adviser: Douglas Cameron

**Spanish & International Relations: Carrie Anne Haslbeck**, "El catalan en Espana: historia de una ironia," Adviser: Juan-Ramon de Arana

*\*Received Distinguished Honors*

### Academic Honor Societies

*Phi Beta Kappa* is a national academic honor society founded at the College of William and Mary in Williamsburg, Va., on Dec. 5, 1776. The stated purpose of Phi Beta Kappa is to "recognize and encourage scholarship, friendship, and cultural interests." The Ursinus College chapter, Tau of Pennsylvania, was approved on October 19, 1991. Composed of faculty members holding Phi Beta Kappa keys, the chapter confers membership on the basis of "high scholarship, liberal culture, and good character." Election to Phi Beta Kappa is considered the highest academic honor for undergraduate students.

*Cub and Key Society*: The Cub and Key Society was founded in 1939 at Ursinus College to recognize the male leaders of the campus who have distinguished themselves through high scholastic standing, participation in extracurricular activities, and service to the College community. Election to the society is limited to second-semester juniors.

## THE URSINUS PLAN FOR LIBERAL STUDIES

*Whitian Society:* The Whitian Society was founded in 1939 at Ursinus College by Dr. Elizabeth B. White, professor of history and dean of women. The society recognizes the achievements of women who have distinguished themselves through outstanding academic performance, in addition to leadership and service to the College. Election to the society is limited to second-semester juniors.

*Alpha Sigma Lambda:* The national honorary society for continuing higher education students, was founded in 1945 at Northwestern University. The Ursinus College chapter, Gamma Omicron, was installed April 8, 1983. Election to the society is based on academic achievement and is limited to sophomore, junior and senior continuing education students.

### **Honor Societies; discipline-based**

These include: Alpha Psi Omega, national honorary dramatics fraternity; Beta Beta Beta, an honorary society for the biological sciences; Kappa Mu Epsilon, the national mathematics honor society; Omicron Delta Epsilon, the international honor society in economics; Phi Epsilon Kappa, the national honor society in exercise and sports science; Pi Nu Epsilon, the national honorary music fraternity; Phi Alpha Theta, the international history honor society; Phi Sigma Iota, the national foreign language honorary society; Pi Sigma Alpha, the national social science honor society; Psi Chi, the national honor society in psychology; Sigma Pi Sigma, the national physics honor society; and Sigma Tau Delta, the national English honor society; Sigma Xi, the national honorary fraternity for the recognition and encouragement of scientific research; and Theta Chi, the Ursinus chapter of Lambda Pi Eta, the national communication honor society.

## **ACADEMIC POLICIES**

### **The Departmental System**

The departmental system is employed in the organization and administration of instruction at Ursinus College. By this system, 21 majors are offered in 15 departments: anthropology and sociology; biology; chemistry; classics; communication studies and theater, English; economics and business administration; exercise and sport science; history; mathematics and computer science; modern languages; philosophy and religion; physics; politics and international relations; and psychology. An interdisciplinary major in East Asian studies is also offered.

### **Freshman Advising Program**

The freshman advising program is designed to assist new students adjust to the educational challenges of the college experience. New students meet on a regular basis with their freshman advisers throughout the first year and consult with them about selection of courses, study skills, and personal and career goals.

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### **Choice of Studies**

At matriculation, students designate possible areas of academic interest. In the second semester, freshmen may declare a major field to study in depth. Students who have not decided on a major by the end of the second or third semester will retain their freshman advisers. In the fourth semester, students must designate a major field. The chairpersons of the students' major departments will assign their academic advisers. The approval of the adviser is necessary before a student may register for or enter any course of study, or discontinue any work.

### **Registration**

First-year students register for the fall semester in consultation with their advisers on freshman orientation days held during the summer. Returning students register for the fall semester during the spring registration period listed in the back of the catalog. Registration for the spring term is completed for all students during the fall registration period listed in the back of the catalog.

Students are registered according to the schedule for the registration period published by the Registrar's Office. Before that, students consult with their advisers to prepare schedules of courses for their college careers.

Students must remember that they alone are responsible for making sure they have completed College requirements and departmental requirements. When students change their majors, they must fulfill the requirements of the most recent major department in order to be graduated.

Students may add or drop courses at any time during the first two weeks of classes. No course may be added after the second week of classes. Courses dropped after the second week of classes but before the midpoint of the course will be designated by a W on the student's record. Students who withdraw after the midpoint of a course will receive a grade of WE. Students who withdraw from a course without permission will receive a grade of FA fee is charged for any change in registration after the first three days of the semester.

### **Class Attendance**

Ursinus College is committed to the principle that class attendance is a vital part of its academic program, making possible that dialogue between student and teacher which is the foundation of the educational process. Students should therefore recognize that absence from class denies them access to the full measure of college education. While urging regular class attendance, the College at the same time wishes to allow students an opportunity to develop a personal responsibility toward academic work. In keeping with these convictions, the following policies govern class attendance:

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Students should anticipate that in the normal course of a semester, unanticipated (illness, emergencies) as well as planned events (games, personal business) will call them away from their classes. For this reason, it is important that each student exercise reasonable judgment regarding class attendance at all times. Every student is accountable for all work missed. Instructors, however, are under no obligation to make special arrangements for students who are absent.

A first-year student who is not on the Dean's List and who is absent from a course for a total of more than two weeks' meetings may be excluded from the course with a grade of F, unless the dean, after consultation with the faculty member, permits the student to be reinstated. Students on academic probation are subject to the same regulations as first-year students.

Students for whom an academic warning is issued must limit future absences in that course to the number of times the course meets per week. After the issuance of an academic warning, a student who exceeds the allowed number of absences may be excluded from the course with a grade of F, unless the dean, after consultation with the faculty member, permits the student to be reinstated.

Any instructor may set attendance regulations for courses, but in no case will a student be limited to fewer absences than twice the number of weekly meetings of the course. The faculty member must announce the attendance policy and its consequences on the class syllabus.

### **Statement on Academic Honesty**

Ursinus College is a small community which functions by a social contract among students, faculty, administration and alumni. In order for the spirit of community to endure and thrive, this agreement, based upon shared values and responsibilities and a sense of mutual respect, trust and cooperation, must be preserved. Students have an obligation to act ethically concerning academic matters and the faculty has a responsibility to require academic honesty from students and to be vigilant in order to discourage dishonesty.

Lying, cheating, stealing, plagiarism and other forms of academic dishonesty violate this spirit of mutual respect and collaboration and corrode the atmosphere of openness and free inquiry upon which the educational process is based. Such activities are demeaning and potentially damaging to those who undertake them. Moreover, academic dishonesty is damaging to the student body as a whole, in that it cheapens the achievement of the honest majority of students and subverts the integrity and reputation of the institution with which they will be identified for the rest of their lives.

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Students should be aware that there are many legitimate sources of help available on campus. Several departments, such as Mathematics, provide help sessions. There is a writing center run by the Department of English, and the Library provides research help. This help is provided for academic assistance and is designed to enhance the learning process rather than circumventing it which occurs in cases of academic dishonesty.

The student body, the faculty, and the administration of Ursinus College therefore unanimously condemn academic dishonesty in all its forms and affirm that it is the responsibility of all members of the college community to prevent such activity.

### Grades of Scholarship

When a course has been completed, the standing of the student is expressed by one of the following grades: A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F; or, if the course is a Satisfactory/Unsatisfactory (S/U) course, the student's standing is expressed by the grade S or the grade U.

Letter grades have the following equivalence assigned:

Grade	GPA
A+	4.00
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00

The mark of S signifies that a student has earned the course credits in an S/U course at the B (3.00) level or higher; this mark is not included in the computation of a student's average. The mark of U in an S/U course is calculated into the student's average as F (0.0).

The mark of W signifies that a student withdrew from the course prior to the midpoint of a course, and is not calculated into a student's average. The mark of WF signifies that a student withdrew from the course after the midpoint of the course, and is calculated into the student's average as an F (0.00).

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The mark of I, which may be given only with the written permission of the dean, is reserved for cases of incomplete work, due to documented physical incapacitation or other extenuating circumstances beyond the student's control. A plan and schedule for completing the remaining work, agreeable to student and professor, must accompany the request for an I. If the mark of I is not removed within one month after the end of the semester in which the I was given, the grade F will be assigned for the course.

### GRADE APPEAL

Faculty must follow practices of fairness and objectivity when assigning student grades. Since it is assumed that the final grade is obtained after a careful evaluation of a student's entire academic performance in a class, the course syllabus must contain a clear statement of how a final grade is computed. Even though grading may be considered to be inherently subjective, it does not follow that grading is an arbitrary or capricious practice. Normally, no grade appeal will be accepted unless there is an error in computation or there is evidence of prejudice or caprice.

### Grade Appeal Procedure

1. A student who wishes to appeal a final grade must contact the instructor and attempt to resolve the issue.
2. If, upon consultation with the instructor, there is no resolution, the student contacts the chair of the department in which the course is offered, or in the case where there is no chair, the Dean of the College. The chair attempts to resolve the conflict by discussing the issue with the instructor involved. Every effort should be made to resolve the conflict at the departmental level.
3. If there is still no resolution, the student contacts the Office of the Dean of the College, in writing, describes the nature of the complaint. The Dean discusses the matter with the chair and the instructor and makes a recommendation to the instructor.
4. If there is still no resolution, the Dean will bring the issue to the committee on Academic Standing and/or appoint an ad hoc committee of three faculty to make a recommendation to the instructor. The committee will be composed of members acceptable to both the student and the faculty member.

### Time Frame

Students must initiate the grade appeal no later than two weeks after the start of the next semester. The appeal process should take no longer than four weeks from the student's initial contact with the instructor to the final recommendation of the ad hoc committee.

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### **Repeating Courses**

Students may retake any course, but they shall receive credit only once for the same course. Although a course may be retaken as many times as necessary to receive a passing grade, students may repeat only once courses they passed on the initial try. All grades for courses taken at Ursinus will appear on the transcript, but the last grade earned will replace the previous grades for the purpose of calculating the GPA. Credits earned elsewhere and accepted as transfer credits will not alter the GPA or serve as a replacement grade.

### **Academic Probation**

Any students who have a GPA below C (2.00) at the end of any semester or who have a semester GPA below 2.00 will be placed on academic probation by the Committee on Academic Standing or by the faculty. Students on academic probation may be restricted in their extracurricular activities. On-campus employment and Ursinus College financial aid may be restricted for a student whose average for the preceding academic year, including summer session, is below C (2.00).

### **Dismissal**

Students will be dismissed from the College if at the end of their first semester their GPA is below 0.67; if at the end of their second semester their GPA is below 1.33; if at the end of their third semester their GPA is below 1.67; if at the end of their fourth semester or 64 semester hours (including transfer credits), or any subsequent semester, their GPA is below 2.00. Students will also be dismissed if they achieve a semester average below C (2.00) for more than two successive semesters, regardless of their cumulative average. Exceptions to the above policy must be approved by the faculty, or by the Academic Standards and Discipline Committee acting for the faculty. The action of the faculty, or the Academic Standards and Discipline Committee acting for the faculty, in all cases is final.

Students who have been dismissed are not eligible to take courses in the Center for Continuous Learning or to take summer courses at Ursinus College.

Any student may be dismissed from the College for academic violations such as cheating or plagiarism, regardless of the student's academic average.

Non-academic reasons for dismissal are outlined in the Student Handbook.

### **Readmission**

Students who have been discontinued for academic reasons may apply for readmission. Unless there are unusual circumstances, applications for readmission will not be considered unless one academic year has passed before the readmission date. Readmission is not automatic. To be considered for readmission, students must demonstrate that they are able and prepared to



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return to the College for serious academic work. They should take courses at an accredited institution and obtain at least a B (3.00) average. They may work or engage in community service or other volunteer activities that will demonstrate a seriousness of purpose.

Application for readmission is made to the Office of Admissions. Students' previous academic performance and social activities at Ursinus will be important factors in the readmission decision. The faculty or the Academic Standards and Discipline Committee must approve readmissions.

### **Withdrawal**

Students who seek to withdraw from the College must notify the dean of the College in writing of this intention and its effective date, and must satisfy all obligations (including bills, the return of keys, equipment, and other College property). Failure to meet any such obligation will render the student liable to dishonorable dismissal.

### **Study Elsewhere**

Students are not permitted to earn credit toward graduation from Ursinus College by study at another college unless they have been granted permission by their academic advisers and the Committee on Academic Standards and Discipline. Required courses in the department of a student's major should be taken at Ursinus. Approval to take such courses elsewhere will be granted by the Academic Standards and Discipline Committee only with the approval of the chairperson of the major department and if special or mitigating circumstances exist. Credit, but not grades, for approved courses taken elsewhere will be transferred upon successful completion of the course with a grade of C (2.00) or better and upon receipt of an official transcript from the other college. It is recommended that students take these courses at a four-year institution. Students who plan to study abroad must be admitted into the study abroad program before they are eligible for transfer credit.

### **Summer Program**

Ursinus students engage in research and internships during the summer, which are approved by the Dean's Office and supported, with housing and a stipend, by the College and outside organizations and foundations. During the summer session, students conducted research under the advisement of faculty mentors, meeting periodically to gather resources, discuss methods, data collection and analysis.

Students wishing to take summer study at other colleges must obtain approval in advance from their adviser, from the chairperson of their department if they wish to take a course required for the major, and from the Office of the Registrar. In order for credits for such approved courses to be transferred to Ursinus, the student must obtain a grade of C (2.00) or better and arrange for the college where the courses were taken to send an

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official transcript to Ursinus. Students planning to take summer classes abroad must also consult with the study abroad coordinator.

### **Critical Languages Program**

Highly motivated students interested in doing work in languages not currently offered in the regular curriculum are advised to investigate the opportunity for such study through the Department of Modern Languages or the Critical Languages Program. In the Critical Languages Program, initial emphasis is on the spoken language. As the student progresses, skill in reading and writing is also developed. The program requires 12 to 14 hours per week of self-instruction, using tape-recorded materials coordinated with the text, and a minimum of two hours per week of small group tutorial sessions with a native speaker of the language. At the end of each term, an outside specialist examines the student and evaluates the work covered during the semester. Each course carries three credits. Ursinus College is a member of the National Association of Self-Instructional Language Programs. Highly motivated students who have successfully mastered another foreign language previously should contact Dr. Colette Trout (Department of Modern Languages).

## **OFF-CAMPUS STUDY**

### **Internships**

An internship is a structured and supervised professional experience for which a student receives academic credit. The Career Services Office has information on a wide range of internship opportunities.

### **Guidelines:**

Credit for a departmental internship will be established within the department and may be either three or four credits. The faculty internship adviser will determine whether an internship opportunity meets the standards to qualify for academic credit. Approval for academic credit for internship experiences will not be granted for internships in progress or following their completion. Students register for a summer internship during the spring registration period. On campus internships must be approved by the Academic Standards Committee.

### **Qualifications:**

Students who meet the following qualifications will be permitted to enroll in an internship:

- a) junior or senior status, and have completed three courses within the department that administers the internship, or permission of the faculty internship adviser
- b) must have an overall GPA of 2.0

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- c) students will be permitted to undertake two internships under any of the following conditions:
- 1) the internship site requires a two-term commitment
  - 2) the student is a double major and wishes an internship in each major
  - 3) the second internship is outside their major (e.g. minor)
  - 4) the two internships are within the same major but are so different as to constitute a markedly different experience
  - 5) two internships may not be concurrent
- d) exceptions to these qualifications must be approved by Academic Standards and Discipline Committee.

### **Defined Activities:**

The internships will include the following specified activities.

- a) specified number of hours at the internship site; the minimum hourly requirement will be 10-12 hours per week with a minimum of 160 hours per semester - four credits; 120 hours per semester - three credits
- b) submission of the internship registration form (internship learning agreement)
- c) a journal or daily log recording activities and hours
- d) meetings with the faculty internship adviser
- e) a final research paper or other visible product such as a portfolio, video
- f) whenever possible, a public oral presentation of results.

### **Grading:**

Since the faculty internship adviser is responsible for the final grade, the internship will be graded on the basis of:

- a) final visible product as defined by internship-granting department
- b) input from on-site adviser
- c) input from faculty internship advisers

### **Engineering Program**

Arrangements have been made with the engineering schools of the University of Pennsylvania and the University of Southern California, to which a student may apply for transfer after completing three years of prescribed work toward a B.A. at Ursinus College. Ursinus College will grant the B.A. after a student has satisfied the requirements for that degree. The engineering school will grant the engineering degree on satisfactory completion of the fifth year. Candidates for the engineering program must present four years of entrance credit in mathematics.

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### NATIONAL PROGRAMS

#### **Washington Semester**

Ursinus is one of more than 200 institutions participating in the Washington Semester Program, a cooperative arrangement conducted by American University in Washington, D.C. The program offers several specializations, including the American Politics Semester, the Economic Policy Semester, the Justice Semester, the Foreign Policy Semester, the Journalism Semester, and the Art and Architecture Semester. These programs give selected juniors and seniors an opportunity to work with people and resources in the nation's capital so as to understand better the dynamics of American politics and policymaking.

Under the direction of full-time faculty from American University, students participate in seminars with governmental officials, lobbyists, and media representatives; they arrange an internship with one of the three branches of the national government, political parties, interest groups, research organizations, or the media; and they may complete a major research project on a current issue or policy problem. Candidates for selection should have a firm grounding in the area they wish to study. Interested students should contact Dr. Gerard Fitzpatrick (Department of Politics).

#### **Howard Semester Program**

This program allows Ursinus students to attend Howard University in Washington, D.C., under an exchange agreement between the two institutions. Students wishing to participate will normally do so for one semester in their junior year. Students will pay Howard's tuition and fees.

Interested students should contact Jenneen Flamer (Admissions Office).

#### **Capital Semester**

The Capital Semester Internship is sponsored by the Pennsylvania Department of Education and the Office of Administration. It offers juniors and seniors who are Pennsylvania residents an opportunity to apply classroom knowledge in internships in state government-related agencies in Harrisburg. Placements are available in a wide variety of fields, including accounting, business, communications, education, health, law, public welfare, and taxation.

In consultation with a faculty adviser, participating students prepare a substantial reading list and detailed outline of a major research project to which the reading would be directed. The project, researched at the internship site, is presented to the faculty adviser by means of a major paper. In addition, students are required to maintain a journal and to participate in a series of seminars at their placement sites. Interested students should contact Dr. Gerard Fitzpatrick (Department of Politics).

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### **Sea Education Association (SEA) Semester**

The Sea Education Association (SEA), founded in 1971, is located on a campus in Woods Hole, Mass. SEA operates year-round and its sailing vessels SSV Westward (125-foot schooner) and SSV Corwith Cramer (134-foot brigantine) routinely sail the waters of the north Atlantic Ocean and the Caribbean Sea - from Newfoundland to Venezuela. Sea Semester (12 weeks) consists of six weeks spent in Woods Hole (oceanography, maritime studies, nautical science) followed by six weeks at sea (oceanographic research). After successfully completing SEA Semester, an Ursinus student earns 16 semester hours of academic credit. Ursinus College is a formal affiliate of SEA and students receive credit directly from Ursinus. An important component of this interdisciplinary program is the development of self-discipline, curiosity, persistence and collaborative investigation. The W. W. Smith Foundation accepts applications for financial assistance in the SEA program. Interested students should contact Dr. James Sidie (Department of Biology.)

### **INTERNATIONAL PROGRAMS**

Ursinus College students may spend a semester, a year, or a summer in an approved study abroad program, provided they are students in good standing, are recommended by their major adviser, and, in the opinion of the dean and the faculty, will be worthy representatives of the College and will profit from this experience. Rising sophomores may study abroad as early as the summer following their freshman year. Juniors are especially encouraged to study abroad, and seniors may petition to study abroad in the fall semester of their last year. The immediate knowledge of the cultural heritage of another country, with its contemporary economic and social problems, affords students an awareness of differing values and an understanding of our own country's relation to issues which confront the world today. All students, regardless of major, are encouraged to study abroad, but they normally should have completed courses through at least the intermediate level in the language of the country involved. The course of study abroad must be approved at the time that permission is given. Upon evidence of successful completion of the program, a maximum of 16 credits per term will be given for studies pursued abroad. Information may be obtained from the study abroad coordinator or faculty advisers responsible for specific programs. All work abroad must be approved by the study abroad coordinator prior to departure.

### **SUMMER AND WINTER PROGRAMS**

Ursinus College offers several programs during the January interim or during the summer. All programs are conducted by Ursinus College faculty.

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The summer program in **Japan**, which runs from late May to late June, is offered in collaboration with Tohoku Gakuin University in Sendai, Japan. Students live with families while studying at the university and have an opportunity to visit Hiroshima and Tokyo.

Adviser: Chika Inoue (Department of Modern Languages).

The four-week summer program in **Mexico** takes place from mid-July to mid-August and includes a homestay in Cuernavaca and travel to Puebla, Mexico City, and other areas of interest, such as the Yucatan Peninsula, Oaxaca, or the west coast of Mexico.

Adviser: Dr. Douglas Cameron (Department of Modern Languages)

Biology of Tropical Rain forests is a field study of the rain forests of **Costa Rica**. Qualified students meet for 15 hours on campus and spend three weeks in the field. Side trips include visits to cloud forests or coral reefs. The program is offered in January in alternating years.

Advisers: Drs. Robert and Ellen Dawley (Department of Biology).

Winter study in **Mexico** is a two-week language course, including classroom study, homestay with a Mexican family, afternoon excursions and weekend travel. Offered during winter break in alternating years.

Adviser: Dr. Douglas Cameron (Department of Modern Languages).

Winter study in **Senegal** is a two-week language course, including classroom study, homestay with a Sengalese family, excursions and weekend travel. Offered during winter break.

Adviser: Dr. Frances Novack (Department of Modern Languages.)

Art in **France** and **Italy** is a three-to-four week program that takes place in late May and June. The program alternates between France and Italy and offers students the opportunity to develop individualized projects as well as immersion in the artistic life of a particular region.

Ursinus in **France** is a four-week program in Southern France based in Provence. This program offers students several options: Art History, Studio Art, Photography, and Independent Research. The many museums of the town and region serve as the focus of the exploration of the art and architecture of Provence. On-site response papers and a research project round out the Art History experience. The regional landscape is explored as Ursinus students document the area. A journal and a portfolio of work or a research project serve as visible products of the program.

Adviser: Dr. Pamela Potter-Hennessey (Department of Art)

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The Summer Program in **Germany** is held in Tübingen in southwestern Germany. Students of all majors and language levels study intensive language at the university, live in student residences and have the opportunity to enroll in a practicum or internship. The six-week program begins at the end of May and ends in early July.

Adviser: Dr. Robin Clouser (Department of Modern Languages).

### SEMESTER AND YEAR PROGRAMS

#### **Costa Rica: Organization for Tropical Studies**

Ursinus has an affiliation with The Organization for Tropical Studies (OTS) in Costa Rica which offers an integrated semester program in environmental science, field research in tropical biology, Spanish language and Latin American culture. OTS field stations are prime research sites and facilities used by scientists from all over the world. Students transfer 16 credits.

Advisers: Drs. Robert and Ellen Dawley (Department of Biology) and Dr. Douglas Cameron (Department of Modern Languages).

#### **France: American University Center in Provence**

Ursinus has an agreement with the American University Center in Provence, in Aix-en-Provence, France. Students in good standing may study there for a semester or an entire academic year. Students normally should have a 3.00 GPA average and proficiency in French sufficient to study at the 200 level. A special aspect of the program is the French Practicum course, which requires students to integrate themselves with French life by undertaking practical activities which place them in direct, natural contact with the local population. In addition to AUCP classes, students will have the opportunity to study in the French Université de Provence and will live with French families. The program is open to majors in any subject. Students may transfer up to 16 credits a term.

Adviser: Dr. Frances Novack (Department of Modern Languages).

#### **France: University of Strasbourg**

Ursinus College has a formal agreement with the Hood College program in Strasbourg. Students must have a 3.00 GPA and have sufficient background in French to take courses at the 200 level. This program is of particular interest to students wishing to study the European community with its political and economic implications. Qualified students are eligible for internships. Courses in German are also available. Students live in university residences and have the opportunity to spend weekends with French host families.

Adviser: Dr. Colette Trout (Department of Modern Languages)

**Germany: Heidelberg University**

The University of Heidelberg, in affiliation with Heidelberg College of Tiffin, Ohio, serves as the site for Ursinus College students for the entire year, the spring or the shortened fall semester. Requirements: 3.00 GPA and at least two years of college-level language study. All students take an intensive four-week preliminary course. Depending on the results of the mandatory German Language Proficiency Examination, students are placed in courses at the International Study Center, the Institute for German as a Foreign Language, the Junior Year Student Center or in other departments of the University. All students participate in weekly tutorials, community activities and language exchange partnerships. Internships are available to qualified students. Students are housed with German students in university or private residence halls.

Adviser: Dr. Robin Clouser (Department of Modern Languages).

**Japan: Ursinus-Tohoku Gakuin University Program**

Ursinus College has enjoyed a long-standing tradition of exchange programs with Tohoku Gakuin, its sister university in Sendai, Japan. The student exchange program, which began in the fall of 1991, provides Ursinus students with the opportunity to spend the fall semester at Tohoku Gakuin at no additional cost except transportation. Classes are conducted in English except for Japanese language classes. The program is open to majors in any subject, and students may transfer up to 16 credits. Admission is competitive and students must have completed some Japanese language courses.

Adviser: Chika Inoue (Department of Modern Languages) and Dr. Hugh Clark (Department of History).

**Mexico: Ursinus/Universidad de las Americas-Puebla Program**

This program is a one-for-one student exchange program with the Universidad de las Americas-Puebla in Cholula, Mexico. Students may spend the fall or spring semester or a complete academic year at UDLA at no additional costs except transportation and spending money. If their level of proficiency in Spanish is adequate and they have the required prerequisites, Ursinus students at UDLA may enroll in courses in all fields with Mexican students. If not, they must enroll in special courses for foreigners in Spanish, in Mexican history and culture, and in Latin American literature. This program is open to majors in any field. Students may transfer up to 16 credits per semester.

Adviser: Dr. Douglas Cameron (Department of Modern Languages).



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### **Senegal: Ursinus-Université de Saint-Louis**

Students may spend the fall semester or an entire academic year in Senegal through a direct exchange program between Ursinus College and the Université de Saint-Louis. All students are enrolled in an intensive four-week orientation program and take courses at the University. Students participate in tutorials, language exchange partnerships and cultural activities. Housing is provided by the university. Requirements: Two years of college-level language at the 200 level.

Adviser: Dr. Frances Novack (Department of Modern Languages).

### **Spain: Instituto Universitario de Sevilla**

Ursinus has a formal association with the Instituto Universitario de Sevilla, Spain. Ursinus students who are recommended by the faculty to study in a Spanish-speaking country will be accepted by IUS, provided that they have a cumulative 2.5 GPA. Students who have enough proficiency to take all the courses of study in Spanish normally take courses at the Instituto and special cursos concertados at the University of Seville. The Instituto provides weekly tutorials in addition to regularly scheduled classes. Students who do not have sufficient language preparation but have completed Spanish 101-102, 111-112, or 111-118 may register for the Ursinus in Sevilla program which is offered every fall semester and is intended primarily for sophomores. This program offers courses in language and civilization in Spanish and literature in English. All students live with local families and may be paired off with Spanish university students to provide further integration into Spanish life.

Adviser: Dr. Melissa Hardin (Study Abroad Coordinator).

### **Australia, England, Ireland, Scotland and New Zealand**

Ursinus College sponsors a variety of semester and year-long educational programs in Australia, England, Ireland, Scotland and New Zealand. All programs are administered by the Institute for Study Abroad (ISA) at Butler University. Admission requirements for the various universities vary and range from a GPA of 2.5 to 3.5. In the past five years students from the sciences, social sciences and humanities have studied at over 20 different universities through ISA. Internships are available at most sites. All students participate in the orientation programs, family or farm visits and special excursions. Students are housed in university or college housing.

Adviser: Dr. S. Ross Doughty (Department of History).

## **Additional International Opportunities**

Ursinus College is affiliated with several consortia of colleges and universities which have been created to offer high-quality international experiences to our students throughout the world. The Council on International Education Exchange (CIEE) works with Ursinus College faculty to provide semester or summer experiences to qualified students. They include sites in Argentina, Belgium, Chile, China, Czech Republic, Dominican Republic, Ghana, Hungary, Indonesia, Korea, Netherlands, Poland, Russia, Thailand, Tunisia and Vietnam. These programs are either broad-based and conducted in English or discipline-based and conducted in the target language. They are open to students from all majors.

Adviser: Dr. Melissa Hardin, Study Abroad Coordinator

## Courses of Instruction

The system used in numbering courses reflects in general the year of College in which many students schedule a course. Thus a course taken normally in the first year will begin with the number 1, in the second year with a 2, and so on. Numbers do not indicate the year in which a course must or should be taken. Any specific prerequisite or other considerations for enrolling are stated in the course description. Courses whose numbers are followed by a "W" are writing-intensive courses. Courses whose numbers are followed by a "Q" are those which involve quantitative analysis. The credit value of each course is expressed in semester hours. The hours per week are given in the definition of the course.

### AMERICAN STUDIES

*Professor Hemphill (Coordinator).*

Knowledge of our own culture, its history, literature, and politics, is indispensable to responsible American citizenship. Furthermore, a deeper understanding of American culture enables us to appreciate the way in which our own culture affects our perception of other cultures. The American Studies minor provides an interdisciplinary approach to the study of American life through which students can fully appreciate both its unity and diversity. The American Studies minor is useful for students interested in graduate study in any of the disciplines included within the minor as well as in professional study in such areas as law, social work, and journalism.

### Requirements for Minors

A minor concentration in American Studies consists of six courses dealing with aspects of American life. Three of the courses must come from History 221, Politics 218, English 203, Sociology 255. Students will select three elective courses from three different disciplines. They must include one course from the discipline omitted in their selection of core courses. Courses listed in the core may be taken as electives. Elective courses must come from the following: History 320, 321, 323, 325, 327, 328, 329, 421; Politics 310, 321, 322, 323, 324, 325, 328, 330, 355, 418; English 222 and Advanced Colloquia or English seminars in American literature (approval of American Studies Coordinator required); Philosophy 221; Sociology 227, 245, 263, 275; Art 340; Music 207; Communication Studies and Theatre 105.

### ANTHROPOLOGY AND SOCIOLOGY

*Professor Gallagher; Associate Professor Oboler (Chair); Lecturers Machado, Tausig.*

Anthropology and Sociology are related disciplines. Both are interested in the social life of groups. Many of the differences that exist between these two disciplines are the result of the original focus of anthropology on non-

## ANTHROPOLOGY

Western, generally small societies and the primary emphasis of sociology on our own society, which is large and steeped in Western European tradition. Anthropology's concentration on small, non-Western societies encouraged a reliance on participant observation as a research tool, while sociology's interest in our own society required a statistical approach to collecting data.

Today there are scholars in both disciplines using a wide variety of research tools resulting in an overlapping of the methods of these two disciplines. Because of the intrinsic relationship between anthropology and sociology, many of our courses integrate these two disciplines. We believe that our integration of the disciplines will permit students to understand human behavior better, because they will see the variety of solutions that different societies have developed to resolve human problems, rather than simply analyze our own society.

The Department of Anthropology and Sociology is deeply committed to the liberal arts and encourages students to take a wide variety of courses in many different disciplines. There are many opportunities for our students. One direction is toward graduate programs in anthropology and sociology. A second direction would be alternative graduate programs in social work, public administration, criminology, regional planning, and a variety of other professional degrees in related applied disciplines. Another option is secondary education certification in social studies.

### Requirements for Majors

All students majoring in anthropology and sociology must take Anthropology 100 or Sociology 100; Anthropology/Sociology 300 (Methods); Anthropology/Sociology 400W (History and Theories); Anthropology/Sociology 460 (Seminar); four additional courses, at least two of which must be at the 200 level or above; and choose an emphasis in either anthropology or sociology. In addition, all majors are required to take Mathematics 241 (Statistics I). Those interested in teaching should consult the education department booklet, Ursinus College Teacher Education Programs.

### I. Anthropology Emphasis

Students choosing the anthropology emphasis must take a minimum of 32 semester hours in anthropology and sociology, including either eight credits of ethnography (chosen from Anthropology 200, 202, 203, 204, 205, 206, 207, 208, 242 and Sociology 255), or four credits of ethnography and Anthropology 390, research, with a focus on physical anthropology and prehistoric archaeology. English 214, linguistics and modern grammar, may be taken by students with an anthropology emphasis as credit toward the major. In addition, it is recommended that anthropology majors fulfill their science requirement in biology, and choose one of the Area Studies minors offered at Ursinus. (East Asian Studies or Latin American Studies).

## II. Sociology Emphasis

Students choosing the sociology emphasis must take a minimum of 32 semester hours in anthropology and sociology. Psychology 440, Social Psychology, may be taken by students with a sociology emphasis as credit towards the major. In addition, four credit hours in psychology are required. It is highly recommended that students choosing the sociology emphasis should take courses which will give them a broad insight into Western thought. Thus history, philosophy, and literature electives are encouraged.

### Requirements for Minors

The Department of Anthropology and Sociology offers minors in both anthropology and sociology. All students minoring in the department must choose to complete the minor either in anthropology or in sociology.

#### Anthropology Minor

A minor in anthropology requires that students take a minimum of 16 semester hours in anthropology. These courses must include Anthropology 100 (Sociology 100 may be substituted) and at least four credits of ethnography (Anthropology 200, 202, 203, 204, 205, 206, 207, 208, 242 or Sociology 255). [Note: With the possible exception of Sociology 100, courses for the minor should be selected either from the list of anthropology courses or the list of integrated anthropology/sociology courses. Only with special permission may they include courses from the list of sociology courses.]

#### II. Sociology Minor

A minor in sociology requires that students take a minimum of 16 semester hours in sociology. These courses must include Sociology 100 (Anthropology 100 may be substituted) and at least two of the last three courses must be taken at the 200 level or above.

[Note: With the possible exception of Anthropology 100, courses for the minor should be selected either from the list of sociology courses or the list of integrated anthropology/sociology courses. Only with special permission may they include courses from the list of anthropology courses.]

Because of the close relationship between anthropology and sociology, and the large amount of substantive overlap, the department has decided to avoid redundancy by offering topically organized courses including materials from both disciplines.

## ANTHROPOLOGY

### **ANSO-300. Methods in Anthropology and Sociology/ Dr. Gallagher**

An introduction to data collection, analysis and interpretation in anthropology and sociology. Students will be exposed to a wide variety of data collection techniques including participant observation, interviews, questionnaires, existing source studies, and the like. Students will also learn how to analyze and interpret the data with the aid of statistics. Ultimately, we will examine the relationship between research and theory. Prerequisites: Any 100-level course in anthropology and sociology, at least one 200-level course in anthropology and sociology, and Mathematics 241, or written permission of the instructor. Three hours per week. *Four semester hours.*

### **ANSO-381. Anthropology and Sociology Internship/Staff**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact any member of the department for further information. Prerequisites: A major in anthropology and sociology, junior standing, at least 12 credits in anthropology/sociology, and approval of the faculty internship adviser. 12 to 16 hours per week. *Four semester hours.*

### **ANSO-382. Anthropology and Sociology Internship/ Staff**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact

any member of the department for further information. Prerequisites: A major in anthropology and sociology, at least 12 credits in anthropology/sociology, and approval of the faculty internship adviser. 120 hours per semester. *Three semester hours.*

### **ANSO-400W. History and Theories of Anthropology and Sociology/ Dr. Gallagher/Dr. Oboler**

A study of anthropology and sociology within the framework of Western thought. An analysis of the development of anthropological and sociological theory from the 19th century until today. Prerequisites: Anthropology 100 or Sociology 100, and Anthropology/Sociology 300. Three hours per week. *Four semester hours.*

### **ANSO-460. Seminar in Anthropology and Sociology/Staff**

Seminar is the capstone course in the department of anthropology and sociology. As such, it will require that students choose a significant problem that is faced by our society, and using data from anthropology and sociology, as well as information from related disciplines, take an in-depth look at some significant issue. Students will also be required to report their findings in a major paper, and to report their results orally to the other members of the seminar. The topic of the seminar will change each time. Prerequisites: Any 100-level course in anthropology and sociology, ANSO 300 and ANSO 400W. Three hours per week. *Four semester hours.*

## ANTHROPOLOGY

Anthropology is by definition and scope an interdisciplinary subject which addresses itself holistically to the study of people from many places and many periods of time. Anthropology encompasses four distinct but interconnected subfields of study: physical or biological anthropology, social and cultural anthropology, prehistoric archaeology, and linguistic anthropology. The goal of the department is to help the student to understand what it means to be human and to appreciate our own value system more fully through an exposure to the systems of others.

### **ANTH-100. Introduction to Sociocultural Anthropology/ Dr. Gallagher/Dr. Oboler**

Sociocultural anthropology is one of four subfields in anthropology. This course will emphasize sociocultural anthropology but will also briefly look at the other subfields,

physical, prehistoric archaeology, and linguistics. Our main focus will be placed on family patterns, kinship relationships, political organization, economic systems, religion, the arts, and social change. Prerequisites: None. Four hours per week. *Four semester hours.*

**ANTH-200. Introduction to Ethnography/Dr. Gallagher**

Ethnography is the essence of cultural anthropology. This course will explore the ethnographic approach of living with a group of people, collecting information about their culture directly and analyzing these data. Two hours per week. *Two semester hours.*

**ANTH-202. North American Ethnography/Staff**

A course which requires the student to prepare a list of articles and books which focus on Native Americans from Meso-America to the Arctic Circle. These books and articles must be read carefully and critiqued, analyzed, and/or presented in written form. Requires six to eight hours per week. Pre- or corequisite: Anth 200. *Two semester hours.*

**ANTH-203. South American Ethnography/Staff**

A course which requires the student to prepare a list of articles and books which focus on Native Americans from Meso-America to Tierra del Fuego. These books and articles must be read carefully and critiqued, analyzed, and/or presented in written form. Requires six to eight hours per week. Pre- or corequisite: Anth 200. *Two semester hours.*

**ANTH-204. Pacific and Pacific Rim Ethnography/Staff**

A course which requires the student to prepare a list of articles and books which focus on Polynesia, Melanesia, Micronesia, Australia, and the Pacific Rim. These books and articles must be read carefully and critiqued, analyzed, and/or presented in written form. Requires six to eight hours per week. Pre- or corequisite: Anth 200. *Two semester hours.*

**ANTH-205. Middle East Ethnography/Staff**

A course which requires the student to prepare a list of articles and books which focus on the Middle East and North Africa. These books and articles must be read carefully and critiqued, analyzed, and/or presented in written form. Requires six to eight hours per week. Pre- or corequisite: Anth 200. *Two semester hours.*

**ANTH-206. East Asian Ethnography/Staff**

A course which requires the student to prepare a list of articles and books which focus

on Japan, Korea, China, Vietnam, Cambodia, Laos, the Philippines, Indonesia, and other nearby countries. These books and articles must be read carefully and critiqued, analyzed, and/or presented in written form. Requires six to eight hours per week. Pre- or corequisite: Anth 200. *Two semester hours.*

**ANTH-207. South Asian Ethnography/Staff**

A course which requires the student to prepare a list of articles and books which focus on India, Pakistan, Bangladesh, Nepal, and other countries in the area. These books and articles must be read carefully and critiqued, analyzed, and/or presented in written form. Requires six to eight hours per week. Pre- or corequisite: Anth 200. *Two semester hours.*

**ANTH-208. World Ethnography/Staff**

A course which requires the student to prepare a list of articles and books which focus on a variety of cultures from around the world. These books and articles must be read carefully and critiqued, analyzed, and/or presented in written form. Requires six to eight hours per week. Pre- or co-requisite: Anth 200. *Two semester hours.*

**ANTH-225. Gender and Kinship Cross-Culturally/Dr. Gallagher/Dr. Oboler**

The structure of sex and gender roles has important implications for marriage, the family, and kinship in all societies. This course examines sex and gender roles, sexuality, mate selection, marriage customs, divorce, childbearing, parenting, spousal and other kin relations, across the spectrum of world cultures. Prerequisite: any 100-level course in anthropology and sociology or written permission of the instructor.

NOTE: students may not receive credit for both ANSO 262 and ANTH 225.

**ANTH-242. Peoples of Africa/Dr. Oboler**

The African continent south of the Sahara is a complex array of cultures. This course will introduce students to sub-Saharan Africa, by emphasizing both the tremendous diversity of African cultures and the unifying themes that distinguish Africa as a cultural area. Topics include history of human settlement and population migrations; social, political, and economic organization; traditional and contemporary religion and belief systems; the impact of European colonization; and

## ANTHROPOLOGY

contemporary social change. The special case of South Africa receives in-depth attention at the end. Prerequisite: Anthropology 100; Sociology 100, or permission of the instructor. Four hours per week. *Four semester hours.*

### **ANTH-252 (Env/Anth). Peoples and Their Environments/Dr. Oboler**

Human cultural patterns and social institutions are adaptations of particular physical and social environments and subsistence systems on the one hand, and social/political institutions and belief systems on the other, using case studies from a variety of traditional societies. We will also consider the relationship between the global ecosystem and problems of Third World development, patterns of peasant production, causes and consequences of rapid population growth, and the fate of indigenous peoples. Prerequisites: ANTH-100 or permission of the instructor. Three hours per week. *Four semester hours.*

### **ANTH-273. Anthropology Applied to Contemporary Human Problems/Dr. Oboler**

Professional anthropologists who work in academic settings are now outnumbered by those applying their expertise to real-world issues. The aim of this course is to introduce students to the work being done in such fields as forensic and medical anthropology, socioeconomic development, corporate anthropology, and cultural resources management. We also consider how the insights of anthropology contribute to our understanding of such contemporary human problems as crime, war and violence, rapid population growth, world hunger, and the widening gap between rich and poor. Prerequisite: Anthropology 100 or written permission of the instructor. Three hours per week. *Four semester hours.*

### **ANTH-351. Topics in Anthropology/Staff**

An occasional course which will focus on special topics in anthropology. This course is offered as needed. Prerequisite: Any 100-level course in anthropology and sociology or written permission of the instructor. Three hours per week. *Four semester hours.*

### **ANTH-371. Readings in Anthropology I/Staff**

Readings in anthropology is a directed reading course in which a student can further develop an interest he or she began in a course, or can explore an interest in the field for which we do not provide a course. In order to register for readings, a student must have a clear goal, must present a bibliography to the faculty member who will be supervising the readings course, and the work will be demonstrated. Prerequisites: A student must be a major in anthropology and sociology, and have completed at least four courses toward the major. Six to eight hours of reading per week. *Two semester hours.*

### **ANTH-372. Readings in Anthropology II/Staff**

A continuation of Anthropology 371. Prerequisites: A student must be a major in anthropology and sociology, and have completed at least four courses toward the major, and have completed Anthropology 371. Six to eight hours of reading per week. *Two semester hours.*

### **ANTH-390. Research/Staff**

Research involves directed readings and research on an anthropological topic. A student wishing to register for this course must present to the instructor a proposal outlining the research to be completed. The proposal must be approved by the instructor prior to registration. The student must meet with the instructor at regular intervals during the semester, and must submit frequent written progress reports. A final paper will be required. Prerequisites: Major or minor status and eight credit hours in the department and the permission of the instructor. *Four semester hours.*

### **ANTH-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the department chair. Prerequisites: Junior or senior status with a minimum of 16 semester hours in anthropology and sociology and the permission of the department chair. *Four semester hours.*

### **ANTH-492. Research, Independent Work/Staff**

A continuation of Anthropology 491. Prerequisites: Anthropology 491 and permission of the department chair. *Four semester hours.*



**SOCIOLOGY**

Sociology is concerned with the analysis of social life. It is the goal of the department to assist the student in developing insights into why the analysis of social life is considered to be important, what this approach can offer in terms of understanding people, and how it will help us to understand our own society.

**SOC-100. Introduction to Sociology/  
Dr. Gallagher/Staff**

Designed to introduce students to the discipline of sociology, this course emphasizes basic sociological concepts and their applications to various real-life social situations. Topics discussed include society, culture, social groups, interaction, deviance, social stratification, gender roles, race relations, population, urbanization, social change, and social institutions, particularly religion and the family. Four hours per week. *Four semester hours.*

**SOC-227. Marriage and the  
Family/Dr. Oboler/  
Dr. Gallagher/Staff**

This course examines transitions, continuity, and variations in marriages and families in the 20th century United States, with some historical, cross-cultural, and cross-national comparisons. The implications of shifts in public policy for "traditional" and non-traditional families are considered, as well as possible and probable future change in family patterns. Prerequisite: Anthropology

100 or Sociology 100 or written permission of the instructor. Three hours per week. *Four semester hours.*

NOTE: Students may not receive credit for both ANSO 226 and SOC 227.

**SOC-245. Equality and  
Inequality/Staff**

An analysis of the bases and perpetuation of social inequalities, including class, race, gender and other forms of inequality. Theories of causes of stratification and problems of measuring different levels of wealth, power and prestige are examined. Consideration of how social inequality is structured in non-industrial societies precedes emphasis on the nature of social inequality in the United States. Cross-national comparisons of social stratification in modern industrial societies are also made. Prerequisite: Any 100-level course in anthropology and sociology or written permission of the instructor. Three hours per week. *Four semester hours.*

**SOC-255. American Ethnic Groups  
/Dr. Oboler**

This course focuses on ethnic patterns of community social life in urban, suburban, and rural settings. It explores the range and diversity of American ethnic subcultures. It also studies the processes of assimilation and diversification of ethnic groups in the national political, economic and cultural framework. Prerequisites: None. Three hours per week. *Four semester hours.*

**SOC-263. Gender in Contemporary  
Society/Dr. Oboler**

After initial examination of the causes of sex differences, focus is placed on the modern American sex/gender role system: socialization and education; economic, political, religious, and family roles; sexual inequality; and gender-based public policy issues. Some cross-cultural and cross-national comparisons are made. Prerequisite: Anthropology 100 or Sociology 100 or written permission of the instructor. Three hours per week. *Four semester hours.*

NOTE: Students may not receive credit for ANSO 262 and SOC 263.

**SOC-265. Criminology/Staff**

Criminology is designed to introduce students to the field. In this course we will look at what constitutes criminal behavior, criminal law, and our system of criminal justice. Students will be introduced to the theoretical explanations used by social scientists and others to account for crime. Students will also learn about the production and collection of crime data, and about the "criminogenic" features of modern societies, particularly the United States. Three hours per week. *Four semester hours.*

**SOC-275. Social Problems/  
Dr. Gallagher/Staff**

Many societal problems have broad historical and/or social implications. In this course, we will analyze a number of these problems, including poverty, racial and ethnic discrimination, sexual discrimination, illness and medical care, the changing family, envi-

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ronmental crises, abortion, terrorism, and war. Prerequisite: None. Three hours per week. *Four semester hours.*

### **SOC-277-280 Readings in Social Thought and Action/Dr. Oboler**

This is a student-initiated tutorial designed as an opportunity for students to read classic and current writings in social theory and social action. Students may register for a maximum of four semesters of the class, and no readings will be repeated within a four-semester cycle. Prerequisites: open to students who have completed three semesters of college work. Graded S/U. One hour per week. *One semester hour.*

### **SOC-295. Sociology of Medicine/Dr. Gallagher/Staff**

An exploration of various aspects of the health-care system. We will focus on views of illness and disability, patients, doctors, hospitals, and the interaction between these elements as they are influenced by and influence society. Prerequisite: None. Three hours per week. *Four semester hours.*

### **SOC-360. Topics in Sociology Staff**

An occasional course which will focus on special topics in sociology. This course is offered as needed. Prerequisites: Any 100-level course in anthropology and sociology or written permission of the instructor. Three hours per week. *Four semester hours.*

### **SOC-375. Readings in Sociology I/Staff**

Readings in sociology is a directed reading course in which a student can further develop an interest he or she began in a course, or can explore an interest in a field in which we do not provide a course. In order to register for readings, a student must have a clear goal, must present a bibliography to the faculty member who will be supervising the readings course, and the work will be demonstrated. Prerequisites: A student must

be a major in anthropology and sociology, and have completed at least four courses toward the major. Six to eight hours of reading per week. *Two semester hours.*

### **SOC-376. Readings in Sociology II/Staff**

A continuation of Sociology 375. Prerequisites: A student must be a major in anthropology and sociology, and have completed at least four courses toward the major, and have completed Sociology 375. Six to eight hours of reading per week. *Two semester hours.*

### **SOC-391. Research/Staff**

Research involves directed readings and research on a sociological topic. A student wishing to register for this course must present to the instructor a proposal outlining the research to be completed. The proposal must be approved by the instructor prior to registration. The student must meet with the instructor at regular intervals during the semester, and must submit frequent written progress reports. A final paper will be required. Prerequisite: Major or minor status and eight credit hours in the department and the permission of the instructor. *Four semester hours.*

### **SOC-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the department chair. Prerequisites: Junior or senior status, with a minimum of 16 semester hours in sociology and anthropology and permission of the department chair. *Four semester hours.*

### **SOC-492. Research/Independent Work/Staff**

A continuation of Sociology 491. Prerequisites: Sociology 491 and permission of the department chair. *Four semester hours.*

**ART**

*Professor Xaras (Chair); Assistant Professor Potter-Hennessey; Adjunct Professor Hanover; Instructors Zucker, McCarthy.*

Students in a college of liberal education should gain an acquaintance with and an understanding of the creative arts in the broad cultural and intellectual context of Western civilization. Courses are offered in both art history and in studio art.

**Minor in Art**

A minor concentration in art consists of 20 credits in art.

**Minor in Art History**

A minor concentration in art history consists of five courses in art history. At least two semester of the survey (ART 211, 212, 213) are required, and three additional courses may be chosen from 100, 330, 340, 350, 360, 414W.

**ART-100. Introduction to Art/Staff**

The course provides an introduction to the principal elements of the visual arts, including architecture. The purpose of the course is to provide a foundation for an understanding of the visual arts. The approach will be topical, drawing from the spectrum of Western and non-Western art. Intended for freshmen and sophomores. Three hours per week. *Three semester hours.*

**ART-201. Introduction to Studio Art I/ Mr. Xaras**

The course introduces students to the two-dimensional media, including principles of line, shape, color and composition and experience in drawing and painting. Students are expected to develop a portfolio of work outside the class meetings. Enrollment limit of 18. Intended for freshmen and sophomores. Three hours per week plus extensive individual work. *Four semester hours.*

**ART-202. Introduction to Studio Art II/ Mr. Xaras**

This course is a continuation of Studio Art I, in which students develop their creative ability in two-dimensional media. Students are expected to continue developing their talents and techniques outside class. Enrollment limit of 18. Prerequisite: Art 201, or permission of instructor based on portfolio. Three hours per week plus extensive individual work. *Four semester hours.*

**ART-203. Special Topics in Studio Art/ Staff**

This course offers an opportunity to develop creative ability using various two and three-dimensional media. The specific course focus will vary from semester to semester, but topics will include sculpture, graphic design, and printmaking. Open to all students. Enrollment limit of 18. Three hours per week. *Four semester hours.*

**ART-204 The Art of Photography/ Mr. McCarthy**

To explore the expressive qualities of black & white photography as an art form, the student will learn the use of the camera and basic darkroom techniques. The student will learn how to see photographically through a study of contemporary and historical photography, as well as through practical exercises. Open to all students, but students must have access to a 35 mm camera with manual controls. Enrollment is limited to 12. Three hours per week. *Four semester hours.*

**ART-211. History of Art I: Ancient Through Early Christian and Byzantine/ Dr. Potter-Hennessey**

An exploration of the stylistic and conceptual developments of Western architecture, painting and sculpture from prehistory through the Byzantine period. A chronological survey and inquiry into questions of form and meaning will guide an investigation of the relationship between art and society. An interdisciplinary approach will be taken.

## ART

Three hours per week of discussion of assigned readings and museum trips. *Four semester hours.*

**ART-212. History of Art II: Medieval to Baroque/  
Dr. Potter-Hennessey**

A study of architectural monuments, paintings, sculptures, manuscripts and frescoes from the Medieval through the Baroque periods. A chronological approach and an inquiry into form and meaning will guide an exploration into the changing concept of space, time and society. Readings from other disciplines will be used to examine contextual issues, such as the political and religious uses of arts, the relationship between art and science, and the ways in which visual imagery is related to social behavior. Three hours per week of discussion of assigned readings and museum trips. *Four semester hours.*

**ART-213. History of Art III: the 18th Century To the Present/  
Dr. Potter-Hennessey**

An exploration of the origins of modern painting, sculpture and architecture in Europe and North America, and a survey of key artistic movements. Attention will be paid to profound social and political transformations by examining a variety of issues, such as class and gender, reception and spectatorship, racism and Eurocentrism. Three hours per week of discussion of assigned readings and museum trips. The resources of the Berman Museum will be utilized. *Four semester hours.*

NOTE: A student may not receive credit for both 311 and 211; 312 and 212; 313 and 213.

**ART-301. Drawing/Mr. Xaras**

Sustained studio work exploring traditional and modern procedural and conceptual expression using pencil and charcoal. Students must develop their techniques in significant independent work beyond the contact hours. Prerequisite: Art 202 or permission of instructor based on portfolio. Enrollment limit of 18. Three hours per week. *Four semester hours.*

**ART-302. Painting/Mr. Xaras**

Sustained studio work exploring traditional and modern procedural and conceptual expression in various painting media. Students must develop their techniques in

significant independent work beyond the contact hours. Prerequisite: Art 202 or permission of instructor based on portfolio. Enrollment limit of 18. Three hours per week. *Four semester hours.*

**ART-330. Museum Studies/  
Ms. Hanover/  
Dr. Potter-Hennessey**

An introduction to the social and political history of museums, as well as the structure, function and practices of museums in America and Europe. Practical applications of museology will be considered. The Berman Museum will be our laboratory, and independent projects will focus on objects from the Museum's collections. Outside scholars and specialists will offer in-depth examination of selected topics. Visits are made to regional museums. Three hours per week. *Four semester hours.*

**ART-340. American Art/  
Dr. Potter-Hennessey**

An examination of American painting, sculpture and architecture in the United States from its earliest settlement to World War II. Emphasis is placed on the relationship between artistic production/content and the prevailing social and political conditions. Issues to be explored include: art as the expression of personal and national identity; public censorship; the artist's role and status in society; and art as a cultural commodity. The Berman Museum and the museums of Philadelphia will be used extensively. Three hours per week. *Four semester hours.*

**ART-350. Special Topics in Art**

A focused exploration of special subject areas and/or periods in Western and Asian art. Students will utilize regional museums and archives for individual research projects. Museum trips required. This course could also be held off campus. Open to all students. Three hours per week. *Four semester hours.*

**ART-360. Special Topics in Art -  
European Experience**

A study abroad experience in which a focused exploration of special subject areas and/or periods in Western art is conducted in Europe. Individual research projects and group museum and historic site excursions required. Open to all students. *Four semester hours.*

**ART-381. Art Internship**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact department chair for further details. Prerequisites: approval of an internship adviser. 120 hours. *Three semester hours.*

**ART-382. Art Internship**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact department chair for further details. Prerequisites: approval of an internship adviser. 160 hours. *Four semester hours.*

**ART-401. Special Projects in Fine Art/Staff**

Advanced independent work on a creative project approved and supervised by a faculty adviser. Prerequisite: A juried portfolio or other creative works. *Four semester hours.*

**ART-414W. Seminar in the History of Art/Staff**

In the course, students will develop research criteria and techniques, using museum and library resources, in topics in a specific era of art history. Prerequisite: Art 211, 212, or 213, or permission of instructor. Three hours per week. *Four semester hours.*

**ART-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students, with the permission of the instructor. *Four semester hours.*

**ART-492. Research/Independent Work/Staff**

A continuation of Art 491. Prerequisite: Art 491. *Four semester hours.*

**BIOCHEMISTRY and MOLECULAR BIOLOGY**

*Professors* Hess, Levy, Schultz, Sidie, Tortorelli; *Associate Professors* E. Dawley, R. Dawley, Goddard, Price; *Assistant Professors* Bailey, Kohn, Gaede, Lobo, Ruttledge, Williamsen.

Biochemistry and Molecular Biology (BCMB) is an interdisciplinary major that includes courses in biology, chemistry, mathematics, and physics. Students pursuing this major will explore the chemical interactions that underlie life's diversity. Courses in the major will cover the theoretical basis of knowledge in biochemistry and molecular biology, and the experimental strategies used by scientists in these fields. Laboratories will foster creative experimental work by students and familiarize them with current techniques and equipment used by biochemists and molecular biologists. It is the goal of this program to prepare majors for graduate study in biochemistry and molecular biology, post-baccalaureate study in the health sciences, and careers in the pharmaceutical and biotechnology industries.

**Requirements for Biochemistry and Molecular Biology Majors**

A major in Biochemistry and Molecular Biology requires BCMB-307 (or CHEM-309), 351, 426W, 452W; Biology 111WQ, 212WQ, 213; Chemistry 105, 105a, 106, 106a, 205, 205a, 206, 206aQ, 309 (or BCMB-307), 313, 309a or 314a; Mathematics 111, 112; and Physics 111Q.

**BCMB-307. Physical Chemistry for the Life Sciences/Dr. Gaede or Dr. Schultz**

A study of thermodynamics, transport properties and kinetics as applied to biological

systems. Prerequisites: Chemistry 206; Math 112; Physics 111Q. Three hours per week. *Three semester hours.*

Note: Students may not receive credit for both BCMB-307 and CHEM-309.

## BIOCHEMISTRY/BIOLOGY

### **BCMB-351. Biochemistry I/ Dr. Rutledge**

The study of properties, structure, synthesis and function of proteins, carbohydrates, lipids, and nucleic acids. Enzyme catalysis, metabolism of biomolecules, and the biochemical basis of selected physiological processes are also included. Prerequisites: Biology 213 and Chemistry 205, 205a, 206 and 206aQ, or permission of instructor. Three hours of lecture; three hours of laboratory. *Four semester hours.*

Note: Students may not receive credit for both BIO-315 and BCMB-351.

### **BCMB-381. Internship/Staff**

An off-campus academic/work experience. Before beginning the internship, the student must submit a proposal to be approved by both BC & MB faculty and the on-site supervisor. Upon completion of the work, written and oral presentations must be made to the department. Prerequisites: Biology 213 and Chemistry 206aQ. Ten-12 hours per week with a minimum of 160 hours for one semester or four weeks of full-time work. Graded S/U. *Four semester hours.*

### **BCMB-426W. Molecular Biology/ Dr. Lobo**

A survey of gene structure, transcription, translation, regulation, and replication, as well as the theory underlying laboratory techniques used in their study. Laboratory experiments will include DNA and protein isolation, enzymatic manipulations, electrophoresis, and nucleic acid hybridization in an attempt to clone and analyze a bacterial gene (the same course as BIO-426W). This course (together with BCMB-

452W) fulfills the capstone, oral and writing requirements within the major. Prerequisites: Biology 213; or permission of the instructor. (Same as BIO 426W). Three hours of lecture; three hours of laboratory. *Four semester hours.*

### **BCMB-452W. Biochemistry II/Staff**

The study of diverse, complex interactions among biomolecules introduced in BCMB-351, considering both natural (in vivo) and artificial (in vitro) contexts. Cellular mechanisms underlying the regulation of biomolecular interactions and their relevance to selected areas of discovery are also included. This course (together with BCMB-426W) fulfills the capstone, oral and writing requirements of the major. Prerequisite: BCMB-351. Three hours of lecture; three hours of laboratory. *Four semester hours.*

### **BCMB-491. Independent Research/Staff**

Independent laboratory and library investigation in biochemistry and/or molecular biology, with oral progress reports and a research paper presented to the department faculty. Prerequisites: BCMB-351 (or concurrently) and written consent of research adviser and department. 12-14 hours of laboratory per week. *Four semester hours.*

### **BCMB-492W. Independent Research/ Staff**

A continuation of BCMB-491 with a final seminar and thesis describing research work. Emphasis is placed on oral and written presentation, as well as advanced laboratory techniques. Prerequisites: BCMB-491W, BCMB-452W (or concurrently). 12-14 hours of laboratory per week. *Four semester hours.*

## **Departmental honors in Biochemistry and Molecular Biology**

Students successfully completing BCMB-491/492 may be awarded honors but no additional credits will be given. Description of the honors program, including qualifications, is detailed in this catalog.

## **BIOLOGY**

*Professors* Allen, Fields, Sidie, Small; *Associate Professors* E. Dawley (*co-Chairperson*), R. Dawley (*co-Chairperson*), Goddard; *Assistant Professors* Bailey, Kohn, Lobo, Mahaffy (*visiting*), *Lecturer* Schwartz.

The underlying philosophy of the departmental curriculum is to provide a balanced and current biological education within the broader context of the liberal arts. The curriculum has been designed to keep pace with new

developments in the field and to afford students as broad a base as possible for understanding the principles governing life processes. Coursework provides a firm foundation of knowledge in the various sub-disciplines, fosters the scientific attitude, and familiarizes students with current research methods. A capstone course, coupled with oral and written experiences within the department, helps to develop and reinforce the ability to think clearly, critically and independently. In the junior and senior years, students have the opportunity to pursue an independent project, which may include research with a faculty mentor.

Successful completion of the curriculum prepares students for graduate work, for employment in a biologically oriented profession, or for admission to professional schools in the several fields of medicine and related health services. The department also participates in a program leading to teacher certification in secondary schools as described below.

### **Requirements for Majors**

To fulfill the requirements of the major, all students must complete 36 semester hours of biology as outlined in the departmental core and the ancillary requirements listed below.

#### **I. Required Courses:**

Biology 111WQ, 212WQ, 213 and one of the following capstone courses: Biology 415W, 424W, 426W (or BCMB 426W), 431W, 436W, 442W, 449W, 459W, 492W, BCMB 452W.

#### **II. Distribution requirements:**

A. Molecular/Cellular Biology. At least one course must be completed from the following: Biology 345, 426W (or BCMB 426W), 431W, 436W, 449W, 459W, BCMB 351, 452W.

B. Physiology and Anatomy. At least one course must be completed from the following: Biology 305, 306, 335, 349.

C. Organismal/Population Biology. At least one course must be completed from the following: Biology 222, 232, 250, 310, 320, 330, 333, 334, 415W, 424W, 442W.

#### **III. Electives:**

Chosen in accordance with the major area of interest and bringing the total to a minimum of 36 credit hours in biology.

NOTE: A maximum of 10 credit hours of research (Biology 390, 391, 392, 481, 482, 485, 486, 491, 492W) may be applied to the major. A maximum of 12 credit hours of research may be applied to graduation.

#### **IV. Required of all majors:**

A. Chemistry: 105/105a and a choice of 106/106a or 206/206a.

B. Mathematics/Computer Science: Any two of the following - Mathematics 111, 112, 241, 242, 243, 271.

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### V. Recommended to all majors:

- A. One year of physics
- B. A second year of organic chemistry

### Requirements for Minors in Biology

A minor concentration in biology consists of Biology 111WQ, 212WQ, 213, and at least 8 additional elective credits in biology, exclusive of internships or research.

### Requirements for Minors in Neuroscience

A minor in neuroscience consists of Biology 431; Psychology 110, 320 and 325; and either Biology 481, 482, 491 or 492 (approved topic applicable to the neurosciences) or Psychology 481, 482, 491, or 492 (approved topic applicable to the neurosciences). Psychology 327 is recommended but not required.

### Special Career Interests

- I. Students seeking admission to graduate programs in biologically related fields should note the following:
  - A. A second year of chemistry is strongly recommended.
  - B. A fifth course in chemistry is recommended.
  - C. Mathematics/Computer Science 241, 242, 243 and 271 are recommended.
  - D. Additional coursework in mathematics/computer science is recommended.
- II. Prospective secondary school teachers whose interest is biology and who wish to be certified in biological science should note the following:
  - A. Physics 100 or 111Q is required; a year of physics is recommended.
  - B. Geology 100 is required.
  - C. Two mathematics courses are required from among Mathematics 111, 112, 241Q, 242, 243, 271.
  - D. Chemistry 105/105a and a choice of 106/106a or 206/206a are required.
  - E. It is highly recommended that prospective teachers serve at least one semester as departmental assistants.
  - F. Dual certification in general science is highly recommended.
  - G. The curriculum beyond the first year must be arranged in consultation with the chairman of the department of education or with the departmental teacher education adviser. Students and their advisers should consult the education department booklet, Ursinus College Teacher Education Programs.
- III. Students seeking admission to schools of medicine, dentistry, veterinary medicine, optometry and podiatry should note the following:
  - A. Two years of chemistry and one year of general physics for science majors are required by all of the above schools.
  - B. Many schools also require one full year of English and some specify one or two semesters of calculus.



C. Students and their advisers should consult the premedical handbook or one of the premedical advisers for requirements of specific schools.

IV. Students seeking admission to other health science programs, such as physical therapy, should consult the departmental allied health adviser.

V. Students who seek employment in a biologically oriented profession should note the following:

A. Mathematics 241, 242, and 271 are strongly recommended.

B. Economics and Business Administration 100 and 105 are recommended.

C. Additional coursework in communication arts is recommended.

D. Additional coursework in English composition is recommended.

**BIO-100Q. Introduction to Biology/  
Dr. Fields/Dr. Allen**

A study, designed for the non-science major, of selected fundamental principles of the science of biology. Societal issues and current biological problems will be stressed. Two hours of lecture; two hours of laboratory and/or discussion. *Four semester hours.*

NOTE: Students who have received credit for either Biology 111Q or 112Q or 111WQ, 212WQ or 213 may not enroll in Biology 100Q.

**BIO-111WQ. Organisms and Evolution/  
Dr. E. Dawley/  
Dr. R. Dawley/  
Dr. Fields/Dr. Small**

Examines the adaptations, ecology, and systematics of organisms in the light of Darwinian theory and the scientific method. Field and laboratory exercises emphasize independent investigation. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

**BIO-200a. Human Heredity/Dr. Fields**

A study, for non-science majors, of human genetics with emphasis on classical inheritance and the human application of molecular genetics. Social implications and current biological problems will be addressed. Prerequisite: Biology 100Q or 111WQ or permission of the instructor. Two hours of lecture; two hours of laboratory and/or discussion. *Four semester hours.*

NOTE: Biology 100Q and 200 may not be used for elective credits in biology for biology majors or minors.

**BIO-200b. Environmental Science/  
Dr. Sidie**

An introduction, for non-science majors, to the biological basis of environmental issues. Includes a study of ecosystems, populations, resources, energy, hunger, pollution, weather/climate, endangered species and land use. Prerequisite: Any 100-level course in biology, chemistry, geology, or physics. Two hours of lecture; two hours of laboratory and/or discussion. *Four semester hours.*

NOTE: Biology 100Q and 200 may not be used for elective credits in biology for biology majors or minors.

**BIO-212WQ. Cell Biology/Dr.Kohn/  
Dr. Bailey/Dr.Lobo/Dr. Sidie**

An exploration of the molecular structure and function of cells, emphasizing cellular organelles, biochemical reactions in cells, membranes, movement of vesicles in secretory and endocytic pathways, roles of the cytoskeleton, cell signaling, regulation of the cell division cycle, cell-cell communication, and cell differentiation. Prerequisites: Biology 111WQ or permission of the instructor. Three semester hours of lecture per week and three hours of laboratory per week. *Four semester hours.*

Note: Students who have received credit for BIO-225 may not receive credit for BIO-212WQ.

**BIO-213. Genetics/Dr. Goddard**

Examines the basic principles of classical, molecular, and population genetics and introduces experimental methods used in these fields of investigation. Past, current and future issues in the application of genetics, including eugenics, genetic engineering, gene therapy, genetic testing and conserva-

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tion genetics, are featured. Prerequisite: Biology 212WQ, or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

Note: students who have received credit for BIO-226 may not receive credit for BIO-213.

### **BIO-222 Vertebrate Biology/ Dr. Allen**

A study of the diversity, lifestyles and adaptation of modern vertebrate animals and their interactions with one another and with the environment. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture per week. *Four semester hours.*

### **BIO-225. Cell Biology/Dr. Sidie**

A study of the molecular structure and function of prokaryotic and eukaryotic cells, with emphasis on the function of cellular organelles including the processes of respiration, photosynthesis, cell signaling and movement. Prerequisites: Biology 112Q or permission of the instructor. Three hours of lecture per week. *Four semester hours.*

### **BIO-226. Genetics/Dr. Goddard**

A survey of the basic principles of classical, molecular, biochemical and population genetics using a variety of organisms to illustrate the experimental rationale of the genetic problem. Prerequisites: Biology 111Q and 112Q, or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

### **BIO-232 Ethology/Dr. Sidie**

A study of the biological basis of behavior. Topics include the neural and hormonal basis of behavior, orientation mechanisms, biological clocks, animal communication, learning, sociobiology, genetics of behavior, and the evolution of behavior. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture per week. *Three semester hours.*

### **BIO-232a. Ethology Laboratory/ Dr. Sidie**

Experimental investigations of animal behavior. Topics studied include orientation reactions, fish schooling, circadian rhythms, electric fish, habitation, conditioning, pheromones, social behavior, sensory signals and territoriality. Pre- or corequisite: Biology 232. Three hours of laboratory per week. *One semester hour.*

### **BIO-250. Environmental Biology/ Dr. Sidie**

A study of the biological basis of environmental issues. Includes ecosystems, communities, populations, water, energy, geologic resources, biodiversity, weather/climate, pollution, agriculture/hunger, soil resources/pests, solid/toxic hazardous waste, toxicology, land use. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture. Two hours of lab/discussion/simulations/writing per week. *Four semester hours.*

### **BIO-305. Human Anatomy and Functional Morphology/ Dr. Allen**

A study of the structure of human tissues, organs and organ systems and their contributions to the integrated functioning of the human body. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture and three hours of laboratory per week. *Four semester hours.*

### **BIO-306. Human Physiology/ Dr. Bailey**

A study of the physiological processes that support the integrated functioning of the human body. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

### **BIO-310. Biological Oceanography/ Dr. Goddard/Dr. Sidie**

A study of the biological bases of ocean science. Topics discussed include: ocean basins, seawater physics and chemistry, currents, waves, tides, upwelling zones, tidal rhythms in organisms, ocean habitats/biota, marine virology, marine microbiology, plankton, trophic relationships, hydrothermal vent communities, coral reefs. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. (Course may be conducted in part at a marine field station). *Four semester hours.*

### **BIO-320. Biology of the Neotropics/ Dr. E. Dawley, Dr. R. Dawley**

A field study of Costa Rican tropical habitats — including lowland rain forests, montane rain forests, seasonally dry forests, and wetlands — conducted at research sites throughout the country. Topics include diversity and natural history of key plants

and animals, ecological interactions and evolutionary processes, and conservation. Prerequisite: Permission of the instructor and Biology 111WQ. Field investigations accompanied by readings, lectures, and a directed research project. Course will meet 15 hours on campus and three weeks in Costa Rica between the Fall and Spring semesters. *Four semester hours.*

**BIO-330. Marine Biology/Dr. Sidie**  
A field-oriented study of the important marine habitats including pelagic and benthic zones, and intertidal communities. Topics include marine biodiversity - plants, protists, invertebrates, vertebrates; marine ecology; primary production in the sea; estuaries; plankton; nekton; marine mammals; ocean pollution. Prerequisite: Permission of the instructor and Biology 111WQ. Lecture and field investigations. (Course conducted in part at a marine field station.) *Four semester hours.*

**BIO-333. Plant Diversity Dr. Fields**  
A phylogenetic survey of the major non-vascular plant groups with an accompanying comparison to the flowering plants. The course will include identification, morphology, ecology and isolation and culture techniques. Prerequisite: 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

**BIO-334. Biology of the Vascular Plants/Dr. Small**  
A survey of the morphology and evolution of the vascular plants, including the principles, theory and methodology underlying modern taxonomic systems. Available field time centers upon the morphology and taxonomy of the local vascular flora. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

**BIO-335. Plant Physiology/Dr. Fields**  
A study of life processes of green plants and the environmental factors that regulate them. Experiments will illustrate physiological concepts. Prerequisite: Biology 213 and Chemistry 105 and 106a; or permission of instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

**BIO-345. Microbiology/Dr. Lobo**  
The structure, physiology, genetics, diversity, and ecology of micro-organisms. Topics in medical microbiology will be discussed to illustrate basic principles of pathology, virology, immunology, and epidemiology. The laboratory will cover techniques of bacterial propagation, purification, identification, and genetic experimentation. Prerequisites: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

**BIO-349. Experimental Physiology/Dr. Bailey**  
An investigation of the basic principles of vertebrates. Included will be the study of cell physiology, organ function, and systems physiology, including the nervous, cardiovascular, respiratory, gastrointestinal and renal systems. The laboratory will emphasize cooperative problem-solving, experimental design, and independent investigation. Prerequisite: Biology 213 and Chemistry 106, 106a; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

NOTE: Students having received credit for Biology 306 or 346 may not receive credit for Biology 349.

**BIO-350. Selected Topics in Biology/Staff**  
A course offered periodically in an area of special interest to students by a staff member or a visiting lecturer. Prerequisite: permission of the instructor. Three hours per week, plus either intensive writing or three hours of laboratory, depending on the topic. *Four semester hours.*

**BIO-381. Internship/Staff**  
An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the chairman of the department for further details. Prerequisites: Junior standing, nine credits in biology, and approval of a faculty internship adviser. Eleven to 14 hours per week. Graded S/U. *Four semester hours.*

NOTE: Students having received credit for Biology 485 or 486 may not receive credit for Biology 381.

**BIO-390. Directed Study/Staff**  
An introduction to the nature of biological research which can take the form of a

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library review paper or directed research in an ongoing research project. Prerequisites: Biology 212WQ and permission of staff supervisor. Graded S/U. *One semester hour.*

**BIO-391. Directed Research/Staff**  
Laboratory and/or field experiences under the direction of a faculty member and designed to introduce students to fundamental research procedures and data manipulation in the context of an original research project. Prerequisites: Biology 212WQ and permission of a participating staff member. Three hours of laboratory per week. Graded S/U. *One semester hour.*

**BIO-392. Directed Research/Staff**  
Content as in Biology 391. Prerequisites: Biology 212WQ and permission of a participating staff member. Three hours of laboratory per week. Graded S/U. *One semester hour.*

**BIO-415W. Ecology/Dr. Small**  
Studies of the interrelationships between organisms and their environments that determine their distribution and abundance in natural systems. Aspects of energy flow, biotic and abiotic limits, population growth and community organization are considered in the context of the ecosystem. Laboratories include local field work and emphasize techniques for collecting and analyzing data. Prerequisites: Biology 213; or permission of the instructor. Three hours of lecture, three hours of laboratory per week. *Four semester hours.*

**BIO-424W. Evolution/Dr. R. Dawley**  
A study of the Darwinian theory of adaptation and natural selection, focusing on areas of current interest and controversy, such as its application to animal and human behavior and to the study of medicine and disease. Prerequisites: Biology 213; or permission of the instructor. Three hours of lecture per week. *Four semester hours.*

**BIO-426W (BCMB-426W).**  
**Molecular Biology/Dr. Lobo**  
A survey of gene structure, transcription, translation, regulation, and replication, as well as the theory underlying laboratory techniques used in their study. Laboratory experiments will include DNA and protein isolation, enzymatic manipulations, electrophoresis, and nucleic acid hybridization in an attempt to clone and analyze a bacterial gene (the same course as BCMB-

426W). Prerequisites: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

**BIO-431W. Neurobiology/Dr. Sidie**  
Biophysics of excitable membranes, physiology of synapses, sensory receptors, integrative neurophysiology, neuromuscular systems, excitation-secretion coupling and the coding of neural information. Prerequisites: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

**BIO-436W. Analysis of Development/Dr. Allen**  
Investigation of the mechanisms that bring about the differentiation of cells and their subsequent organization into tissues, organs and organ systems. Laboratory work stresses the embryonic development of vertebrates. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

**BIO-442W. Mammalogy/Dr. E. Dawley**  
A study of vertebrate biology using the mammalian class as the case study. The course includes evolutionary history, phylogeny, diversity, structure and function, behavior and ecological aspects of mammals. Prerequisites: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory and field investigations per week. *Four semester hours.*

**BIO-449W. Immunology/Dr. Lobo**  
A study of the cellular and humoral aspects of immunity in humans and other mammals. The course will cover interactions between mammalian hosts and bacterial, fungal, and viral antigens: tumor and transplantation immunology, vaccines and their development and the evolution of the immune system. Prerequisites: Biology 213; or permission of the instructor. Biology 345 is recommended. Three hours per week. *Four semester hours.*

**BIO-459W. Virology/Dr. Goddard**  
After an introduction to general virology, each virus family and its unique approaches to host cell entry, viral replication, and transmission will be discussed. Topics covered will include the social, historical and eco-

conomic impact of human diseases such as yellow fever, and Ebola hemorrhagic fever, and important diseases of crops and agricultural animals. Prerequisites: Biology 213; or permission of the instructor. Four hours per week. *Four semester hours.*

**BIO-481. Independent Research/Staff**

Laboratory or field investigation of some biological phenomenon. This original work includes library-assisted preparation of a final written thesis and the oral presentation of its results before a faculty/student colloquium. Pre- or corequisites: junior or senior standing, written consent of a staff member who will serve as research adviser. Graded S/U. *Four semester hours.*

**BIO-482. Independent Research/Staff**

Content as in Biology 481. This course continues the original work begun in Biology 481. Prerequisites: Biology 481, junior or senior standing, written consent of a staff member who will serve as research adviser. Graded S/U. *Four semester hours.*

**BIO-485. Off-Campus Research/Staff**

An approved, off-campus field or laboratory research experience supervised by a faculty internship adviser and an on-site supervisor. Approved projects result in the library-assisted preparation of a final written thesis and an oral presentation of its results before a faculty/student colloquium. Prerequisite: Junior or senior standing and written con-

sent of a faculty adviser. Eleven to fourteen hours per week. Graded S/U. *Four semester hours.*

NOTE: Students having received credit for Biology 381 may not receive credit for Biology 485.

**BIO-486. Off-Campus Research/Staff**

Content as in Biology 485. This course continues the original work begun in Biology 485. Prerequisites: Biology 485, junior or senior standing and written consent of a staff member who will serve as a research adviser. Graded S/U. *Four semester hours.*

NOTE: Students having received credit for Biology 381 may not receive credit for Biology 486.

**BIO-491. Honors Research/Staff**

Content as in Biology 481, but open only to candidates for departmental honors. Prerequisites: English 100, junior or senior standing, written consent of a staff member who will serve as research adviser. *Four semester hours.*

**BIO-492W. Honors Research/Staff**

Content as in Biology 481, but offered in the spring term and open only to candidates for departmental honors. This continuation of BIO-491 fulfills the capstone, oral and writing requirements within the major. Prerequisites: junior or senior standing, written consent of a staff member who will serve as research adviser. *Four semester hours.*

## CHEMISTRY

*Professors* Hess, Levy, Schultz, Tortorelli (Chair); *Associate Professor* Price; *Assistant Professors* Gaede, Rutledge, Williamsen.

The chemistry department at Ursinus College has been approved by the American Chemical Society since 1959. The objectives of the department are (1) to offer specialized training in chemistry, beyond the basic course, that will enable a graduate to enter a career as a professional chemist; (2) to prepare the student for graduate study; (3) to provide a strong foundation for the student planning to enter medicine, dentistry, or an allied health field; (4) to prepare the student for teaching chemistry at the secondary level; (5) to provide courses which satisfy the departmental requirements for a comprehensive minor; and (6) to provide a course in general chemistry which satisfies the natural science requirements of the College.

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Recognizing that students have different educational objectives, the chemistry department offers several programs leading to a major. Students wishing to combine a chemistry major with a major/minor concentration in another academic department may enroll in any one of the following programs (tracks) in accordance with their career interests.

### **Requirements for Majors**

Regardless of track, all majors must complete the following courses: Chemistry 105/105a, 106/106a, 205/205a, 206/206a, 209, 211, 222, 309/309a, 313, 314a; Math 111/112; and Physics 111Q/112.

### **Track 1. Major Specialization in Chemistry**

Students planning to enter the chemical industry or planning further study in chemistry or chemically related areas (e.g. engineering, biochemistry, material science, and the like) may enroll in this program. In addition to the courses required of all majors, this specialization consists of the following courses central to the field of chemistry: Chemistry 310; and either 491/492W or one additional lecture course, one additional laboratory course, and 400W.

### **Track 2. American Chemical Society Certified Major—Chemistry Emphasis**

The American Chemical Society has adopted a set of standards for undergraduate training in chemistry. In addition to the courses required of all majors, students seeking certification must complete the following courses: Chemistry 310/310a; 401/401a; and either 381 and 400W, 390 and 400W, 400W and 480, 400W and 491, or 491 and 492W.

### **Track 3. Specialization in Chemistry for Medical School and Allied Fields**

This course of study is designed for students planning admission to graduate programs in biochemistry, toxicology, pharmacology, etc., and to professional schools in the healing arts (such as medicine and dentistry) or further study in the health-related fields. In addition to the courses required of all majors, this program consists of the following courses: Chemistry 310; either 400W or 491/492W; BCMB-351, Biology 111 and 112Q.

### **Track 4. Specialization in Chemistry for Science Teaching**

This program satisfies the requirements for secondary school certification in chemistry as established by the Commonwealth of Pennsylvania. In addition to the courses required of all majors, students seeking certification should complete the following: Chemistry 400W, Biology 111 or 112, and the prescribed education courses. A course in geology is recommended. Prospective teachers should serve as laboratory assistants or participate in training. Prospective student teachers must have a 2.00 average in chemistry and receive a departmental recommendation which considers, in addition to academic performance, the student's interpersonal and

communication skills. Students and their advisers should consult the education department booklet, Ursinus College Teacher Education Programs.

### Requirements for Minors

A minor concentration in chemistry consists of Chemistry 105/105a, 106/106a, 205/205a, 206/206a, 313 or 309/309a, and three additional credits in chemistry.

#### CHEM-100Q. The Science of Chemistry/ Staff

A study of the essential nature of chemistry, emphasizing basic chemical principles and applications. Topics may include atomic structure, bonding, the production and utilization of energy, and oxidation-reduction. Societal and historical perspectives are introduced by way of assignments from the popular literature. A knowledge of algebra is assumed. Three hours of lecture and three hours of laboratory per week. *Four semester hours.*

NOTE: A student who has received credit for Chemistry 105 or 111 may not enroll in Chemistry 100Q. Chemistry 100Q may not be used as elective credits for chemistry majors or minors.

#### CHEM-105. General Chemistry I: Foundations/Staff

A study of the principles of chemistry. Topics include structure, bonding, stoichiometry, states of matter, inorganic reactions, thermochemistry, and solutions. The mathematical solution of chemical problems will be emphasized. This course must be taken concurrently with Chemistry 105a.\* Three hours of lecture per week plus one hour of recitation per week at the discretion of the instructor. *Three semester hours.*

\*A student who repeats this need not also repeat its companion lecture or lab.

#### CHEM-105a. Laboratory in General Chemistry I/Staff

Laboratory work related to Chemistry 105. Experimental work may include verification of the stoichiometric relationship between reactants and products, the preparation and characterization of compounds, titrations involving neutralization and redox reactions, measurement of enthalpies of reaction, and colorimetric analysis. This course must be taken concurrently with Chemistry 105.\* Three hours per week. *One semester hour.*

#### CHEM-106. Organic Chemistry I/ Dr. Hess/Dr. Rutledge

An introduction to the study of the physical and chemical properties of both aliphatic and aromatic hydrocarbons within the context of modern structural theory. Areas emphasized are bonding, acidity and basicity in organic systems, stereochemistry, and reaction mechanisms. This course must be taken concurrently with Chemistry 106a.\* Prerequisite: Chemistry 105 or 111. Three hours per week. *Three semester hours.*

#### CHEM-106a. Laboratory in Organic Chemistry I/Staff

Laboratory work related to Chemistry 106. Experimental work may include measurement of physical properties, study of reaction kinetics, and synthesis. Techniques employed include chromatography, distillation, extraction, infrared and UV/vis spectroscopy, and recrystallization. Primary and secondary literature sources are introduced. This course must be taken concurrently with Chemistry 106.\* Prerequisite: Chemistry 105a. Three hours per week. *One semester hour.*

#### CHEM-200. Topics in Chemistry/Staff

A course that examines the impact of chemistry on society. Topics such as plastics, drugs, pollution, food chemistry, and forensic science are considered. Prerequisite: Chemistry 100 or 105. Three hours of lecture and three hours of laboratory per week. *Four semester hours.*

NOTE: Chemistry 200 may not be used as elective credits in chemistry for chemistry majors or minors.

#### CHEM-205. Organic Chemistry II/ Dr. Hess/Dr. Tortorelli

A continuation of Chemistry 106. Particular emphasis is placed on reactivity and synthesis of a variety of organic functional groups including alcohols, ethers, carbonyl compounds, and carboxylic acids. Other topics include macromolecules, carbohydrates, and

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NMR spectroscopy. This course must be taken concurrently with Chemistry 205a.\* Prerequisite: Chemistry 106. Three hours per week. *Three semester hours.*

A student may not receive credit for both Chemistry 205 and 208.

### **CHEM-205a. Laboratory in Organic Chemistry II/Staff**

Laboratory work related to Chemistry 205; a continuation of 106a. This course must be taken concurrently with Chemistry 205.\* Prerequisite: Chemistry 106a. Three hours per week. *One semester hour.*

### **CHEM-206. General Chemistry II: Analysis/Dr. Price/ Dr. Schultz**

A study of kinetics, equilibria, and acid-base chemistry. Sample manipulation techniques and both wet and instrumental methods of analysis will be introduced. This course must be taken concurrently with Chemistry 206a.\* Prerequisite: Chemistry 105. Three hours per week. *Three semester hours.*

### **CHEM-206aQ. Laboratory in General Chemistry II/Staff**

Laboratory work related to Chemistry 206. Special emphasis will be placed on sample manipulation, control of solution characteristics, quantitative analysis, and the development of skills in wet and instrumental analysis methods. Literature sources used in analytical chemistry will be introduced. This course must be taken concurrently with Chemistry 206.\* Prerequisite: Chemistry 105a. Three hours per week. *One semester hour.*

### **CHEM-209. Computers in Chemistry/ Dr. Williamsen**

Introduction to on-line information systems, internet resources, spreadsheets, scientific graphing software, and chemical structure drawing programs. Prerequisite: Chemistry 106. Corequisite: Chemistry 205 (or previously). One hour per week. *One semester hour.*

### **CHEM-211. Spectral Interpretation/ Dr. Tortorelli**

Structural elucidation of organic compounds through interpretation of spectral information obtained from mass spectrometry, UV/vis, IR, and NMR spectroscopy. Prerequisite: Chemistry 106. Corequisite: Chemistry 205 (or previously). One hour per week. *One semester hour.*

### **CHEM-222. Inorganic Chemistry/ Dr. Price**

A systematic survey of the descriptive chemistry of the main group elements with an emphasis on periodicity and nomenclature. The chemistry of the transition metals and nuclear chemistry will be discussed. Primary and secondary literature sources will be used. Corequisite: Chemistry or 206 (or previously). Two hours per week. *Two semester hours.*

### **CHEM-291. Introduction to Research/ Staff**

Laboratory and library work, under the direction of a faculty member, designed to introduce the student to fundamental research procedures and data interpretation in the context of a research project. Upon completion of the work, written and oral reports must be presented to the department. This course may be taken more than once. Prerequisites: Chemistry 105a and permission of the research adviser. Three hours of laboratory per week. Graded S/U. *One semester hour.*

### **CHEM-309. Physical Chemistry I/ Dr. Gaede**

A study of chemical thermodynamics and statistical mechanics. Prerequisites: Chemistry 206; Math 112; Physics 112. Strongly recommended: Math 211. Three hours per week. *Three semester hours.*

Note: Students may not receive credit for both CHEM-309 and BCMB-307.

### **CHEM-309a. Laboratory in Physical Chemistry I/Dr. Gaede**

Laboratory work related to BCMB-307 and Chemistry 309, emphasizing computer and writing skills. An introduction to the primary and secondary literature sources of physical chemistry. Prerequisites: BCMB-307 (or concurrently) or Chemistry 309 (or concurrently) Chemistry 209 recommended. Three hours per week. *One semester hour.*

### **CHEM-310. Physical Chemistry II/ Dr. Gaede**

An in-depth study of kinetics, quantum mechanics, and spectroscopy. Prerequisite: Chemistry 309. Three hours per week. *Three semester hours.*

### **CHEM-310a. Laboratory in Physical Chemistry II/Dr. Gaede**

Laboratory work related to Chemistry 310, emphasizing the use of the literature.



Prerequisites: Chemistry 309a and 310 (or concurrently). Three hours per week. *One semester hour.*

**CHEM-313. Instrumental Analysis/  
Dr. Williamsen**

A study of the theory and application of spectroscopic, separation, and electrochemical instrumental techniques. A general framework for understanding instrumental methods will be presented. Prerequisite: Chemistry 206. Recommended: Chemistry 211 and Physics 112. Four hours per week. *Four semester hours.*

**CHEM-314a. Laboratory in Advanced  
Analytical Chemistry/  
Dr. Williamsen**

Laboratory work related to advanced techniques of analysis. The operation of common instrumentation, demonstrations of the effects of instrumental settings on acquired data, and application of statistical methods will be emphasized. Prerequisites: Chemistry 206a, and 313. One hour of lecture and three hours of laboratory per week. *Two semester hours.*

**CHEM-350. Selected Topics in  
Chemistry/Staff**

A course, offered periodically, dealing with topics of current interest to faculty and students. Prerequisites: Chemistry 205 and 206, and permission of the instructor. Three hours per week. *Three semester hours.*

**CHEM-352. Environmental Chemistry/  
Dr. Price**

The study of the atmosphere, the greenhouse effect, ozone depletion and CFCs, air pollution, acid rain, natural and drinking waters, chlorinated organics, and heavy metals in the environment from a regional and global perspective. Other topics include the treatment of wastewater, toxic and nuclear wastes as well as energy production and its environmental consequences. Offered spring semester of even-numbered years. Prerequisites: Chemistry 106 and 206. Three hours per week. *Three semester hours.*

**CHEM-352a. Laboratory in  
Environmental Chemistry/  
Staff**

Laboratory work related to Chemistry 352 involving the investigation of local air quality, rain water, natural waters and soil using common analytical techniques. Offered

spring semester of even-numbered years. Prerequisites: Chemistry 106a, 206aQ and 352 (or concurrently). Three hours per week. *One semester hour.*

**CHEM-381. Internship/ Dr. Tortorelli**

A laboratory project in cooperation with industry at an industrial site involving a minimum of 10 hours per week for one semester or four weeks of full-time work. Before beginning the internship, the student must submit a proposal to be approved by both the chemistry faculty and the on-site supervisor. Upon completion of the work, written and oral reports must be presented to the department. Prerequisites: Chemistry 205a and 206a. Graded S/U. *Three semester hours.*

**CHEM-390. Summer Research in  
Chemistry/Staff**

Intensive investigation in an area of chemistry with a minimum of 240 hours of full-time laboratory and library work. Upon completion of the work, written and oral reports must be presented to the department. Prerequisites: Chemistry 205a and 206a, and written permission of the research adviser. Graded S/U. *Three semester hours.*

**CHEM-391. Research/Focused Inquiry/  
Staff**

Laboratory and library work, under the direction of a faculty member, and designed to introduce the student to fundamental research procedures and data interpretation in the context of a research project. Upon completion of the work, written and oral reports must be presented to the department. This course may be taken more than once. Prerequisites: Chemistry 205a or 291, and permission of the research adviser. Six hours of laboratory per week. Graded S/U. *Two semester hours.*

**CHEM-400W. Seminar/Dr. Tortorelli**

Exercises in oral and written presentation of scientific material. This course culminates with the composition and presentation of a review paper. Prerequisites: Chemistry 205, 222, 309 (or concurrently), 313 (or concurrently); and English 100. Three hours per week. *Three semester hours.*

**CHEM-401. Advanced Inorganic  
Chemistry/Dr. Price**

A study of bonding theories, point groups, structure, stereochemistry, and reactivity of

## CHEMISTRY/CLASSICS

inorganic and organometallic materials with an emphasis on transition metal compounds. Other topics include superconductivity, catalysis, and bioinorganic chemistry. This course must be taken concurrently with Chemistry 401a.\* Prerequisites: Chemistry 222 (or permission of the instructor), 309 (or concurrently), 313, and 314a. Three hours per week. *Three semester hours.*

### **CHEM-401a. Laboratory in Advanced Inorganic Chemistry/ Dr. Price**

Synthesis and characterization of inorganic and organometallic compounds using advanced techniques. Corequisite: Chemistry 401. Three hours per week. *One semester hour.*

### **CHEM-408. Materials Science/ Dr. Schultz**

Application of chemical, physical, and thermodynamic principles to the understanding of materials. Materials considered include metals, polymers, ceramics, composites, and semiconductors (the same course as Physics 408). Offered spring semester of even-numbered years (alternates with Chemistry 412). Prerequisites: Chemistry 206 and Physics 212, or Chemistry 310 (or concurrently). Three hours per week. *Three semester hours.*

### **CHEM-412. Polymer Chemistry/ Dr. Schultz**

A study of the synthesis, structure, and properties of polymers. Topics include polymerization methods and kinetics, molecular weight averages and distributions, and solution properties. Offered spring semester of odd-numbered years (alternates with Chemistry 408). Prerequisites: Chemistry 205, 309, and 310 (or concurrently). Two hours per week. *Two semester hours.*

## CLASSICS

### *Professor Wickersham (Chair)*

Courses in the department of classics are intended to develop reading ability in ancient Greek and Latin and to introduce the student to the major forms and themes of classical literature and culture. They enhance general linguistic facility and give the student direct access to the original documents and foundations of Western civilization.

### **Requirements for Majors**

General Coursework: Majors must take at least 16 semester hours in Greek, and 16 semester hours in Latin above Latin 100. Majors must include

### **CHEM-480. Off-Campus Research**

An approved, off-campus laboratory research experience supervised by an on-site adviser and faculty liaison involving a minimum of 10 hours per week for one semester or four weeks of full-time work. Upon completion of the work, written and oral reports must be presented to the department. At the time of registration, written consent of the research adviser and the department is required. Co- or Prerequisites: Chemistry 309a or 314a. Graded S/U. *Three semester hours.*

### **CHEM-491. Research/Independent Work/Staff**

Independent laboratory and library investigation in chemistry, with oral progress reports and a research paper presented to the department faculty. At the time of registration, written consent of the research adviser and the department is required. Prerequisites (or concurrently): Chemistry 205a or 206a, and 309a or 314a. One hour of lecture and nine hours of laboratory per week. *Four semester hours.*

### **CHEM-492W. Research/Independent Work/Staff**

A continuation of Chemistry 491, with a final seminar and thesis describing research work. Emphasis is placed on oral and written presentation of scientific research, as well as advanced laboratory techniques. Prerequisites: Chemistry 491; English 100. One hour of lecture and nine hours of laboratory per week. *Four semester hours.*

### **Departmental Honors in Chemistry**

Students successfully completing Chemistry 491; 492W may be awarded honors in chemistry, but no additional credit will be granted. Description of the honors program, including qualifications, is detailed in this catalog.

among their electives eight semester hours in some other language and also elect at least 12 semester hours from the following major-related courses: Classics 321, 326; English 214; Anthropology 100; History 101, 102; Art 311-313; Philosophy 101, 102, 103, 301; Interdivisional Studies 101, 102. Other courses not mentioned may be counted as major-related with the approval of the department.

**Oral Presentation:** This requirement may be satisfied by a special assignment in any ordinary course in the department at the 300 or 400 level. When registering, the candidate shall announce his or her intention to fulfill this requirement in said course; this intention shall be recorded by a letter written by the candidate and placed in the candidate's file. The candidate shall consult with the instructor and arrange that one class-hour in the 12th week of the course be devoted to the oral presentation and discussion thereof. The presentation must be no less than 15 and no more than 20 minutes in length. The instructor shall evaluate the presentation with attention to content and delivery. The evaluation shall show whether or not the candidate has satisfied the requirement; the instructor shall record the result by writing a letter to be placed in the candidate's file, with a copy thereof to be given to the candidate.

**Writing-Intensive Course.** This requirement may be satisfied by the following courses: Greek 401W, 491W; Latin 401W, 491W. The 491W courses will be for those majors who have registered for departmental honors, and they will feature the development of secondary bibliography on the subject of the thesis. All of these writing-intensive courses will begin with a study of the invention and evolution of prose-style in antiquity, with modern parallels. They will then study examples of the forms of writing modernly practiced in classical studies: translations, brief reviews, longer reviews/ discussions, short essays, commentaries, books. Attention in class will be directed towards structure, cogency, and style. Candidates will write original examples in these forms, the amount of formal writing to be no less than 10 pages in the final version. There will also be informal writing in the form of a journal, kept in a composition book to be filled up with daily entries, as well as in-class exercises. The formal writing will be shared with the class, and some of the informal writing as well. English 100 is prerequisite.

**Capstone Experience:** This requirement may be fulfilled by the seminar courses for the Spring semester of the senior year: Greek 402, 492; Latin 402, 492. The 492 courses will be for those majors who are writing an honors thesis, 402 for others. In either case the candidate will be required to execute a substantial project which must combine a topic in Greek or Roman antiquity with the concerns of at least one other department of the College. Examples: ancient historiography, ancient science (biology, astronomy, physics, chemistry), current literary theory and ancient literature, classical archaeology, comparative linguistics. This approach creates a special

## CLASSICS

subject in the major while also integrating the major with the rest of liberal education. Those intending to teach Greek or Latin in the public schools are urged to acquire state certification through the department of education. Students and their advisers should consult the booklet, Ursinus College Teacher Education Programs.

### Requirements for Minors

A minor concentration in Greek consists of 16 credits in Greek and four credits in classics-in-translation (Classics 321, 326). A minor concentration in Latin consists of 16 credits in Latin, and four credits in classics-in-translation (Classics 321, 326).

Ancient texts used in the following two courses are in English translation.

#### CLAS-321. Topics in Classics/ Dr. Wickersham

A thorough study of one area of ancient Greek or Roman experience, thought, and literature. Reading in translation of comedy or epic or tragedy. Prerequisites: English 100; Liberal Studies 100. Three hours per week. *Four semester hours.*

#### CLAS-326. Mythology/Dr. Wickersham

Illustrated lectures survey the tales of gods and heroes in Greek legend, from the creation of the world to the end of the age of myth—the foundations of Western literature. Interpretive approaches are also studied. Prerequisites: English 100; Liberal Studies 100. Three hours per week. *Four semester hours.*

## GREEK

#### GRK-101. Elementary Greek/ Dr. Wickersham

Thorough study of ancient Greek grammar and syntax. Practice in reading and composition. Emphasis on development of reading ability. Forms a unit with Greek 102. Four hours per week. *Four semester hours.*

#### GRK-102. Elementary Greek/ Dr. Wickersham

Continuation of Greek 101. Study of grammar completed and replaced by reading of a whole work, such as a play of Euripides, Xenophon's *Anabasis I*, or a book of the New Testament. Four hours per week. *Four semester hours.*

#### GRK-201. Athens in the Late Fifth Century/Dr. Wickersham

In the twilight of the Golden Age, political and intellectual changes bring stress. A variety of readings related to the search for jus-

tice and the affair of Socrates. Four hours per week. *Four semester hours.*

#### GRK-202. Hellenic Panorama/ Dr. Wickersham

Greek has the longest recorded history of any living language. This course presents a variety of readings spanning the millennia from Homer to the present. Four hours per week. *Four semester hours.*

The following advanced courses will be given according to students' needs and interests; consult with the department concerning available offerings.

#### GRK-311. The Epic/Dr. Wickersham

Large excerpts from the *Iliad* or *Odyssey*. Study of Homer's poetry and thought. Introduction to history of the Greek language, with special attention to phonology. Foundations of Western literature. Prerequisites: Greek 202 or equivalent. Three hours per week. *Four semester hours.*

#### GRK-313. Historical Writers/ Dr. Wickersham

Large excerpts from Herodotus' *Persian Wars*, Thucydides' *Peloponnesian War*, or Xenophon's *Greek History*. Three hours per week. *Four semester hours.*

#### GRK-314. Drama /Dr. Wickersham

Reading and study of Sophocles' *Oedipus the King*, plus one other tragedy of Sophocles, Aeschylus, or Euripides, or a comedy by Aristophanes or Menander. Three hours per week. *Four semester hours.*

#### GRK-315. New Testament/ Dr. Wickersham

At least one book of this important record. Three hours per week. *Four semester hours.*

**GRK-317. Selected Topics/  
Dr. Wickersham**

Content variable, concentration on author, period, genre and the like. Three hours per week. *Four semester hours.*

**GRK-318. Selected Topics/  
Dr. Wickersham**

Three hours per week. *Four semester hours.*

**GRK-401W. Seminar/Dr. Wickersham**  
Seminars of varying content, concentrating on a topic, author or genre, combined with study and practice in writing. Prerequisite: English 100. Three hours per week. *Four semester hours.*

**GRK-402. Seminar/Dr. Wickersham**  
Seminars of varying content, concentrating on a topic, author, or genre. Three hours per week. *Four semester hours.*

**GRK-491W. Research/Independent  
Work/Dr. Wickersham**

This course is open to candidates for departmental honors and to other students with the permission of the department chairman. Concentration in the topic of the honors thesis, with study and practice of writing. Prerequisite: English 100. *Four semester hours.*

**GRK-492. Research/Independent  
Work/Dr. Wickersham**

A continuation of Greek 491. Prerequisite: Greek 491. *Four semester hours.*

**LATIN****LAT-101. Elementary Latin/  
Dr. Wickersham**

Instant production of reading ability, with ever-growing development of vocabulary and style. Forms unit with Latin 102. Four hours per week. *Four semester hours.*

**LAT-102. Elementary Latin/  
Dr. Wickersham**

Review of elementary Latin. Readings depict life in the High Empire. Four hours per week. *Four semester hours.*

**LAT-201. From Aeneas to  
Hannibal/Dr. Wickersham**

Readings present legends and history of Roman origins from the Trojan War through the first war with Carthage. Four hours per week. *Four semester hours.*

**LAT-202. Rome: Triumph and  
Tragedy/Dr. Wickersham**

Readings from Livy, Sallust, Eutropius, Cicero: Rome gains the world while endangering its own soul. Four hours per week. *Four semester hours.* The sequences Latin 101-102 or 201-202 are recommended for fulfilling the foreign language requirement.

The following advanced courses will be given according to students' needs and interests; consult with the department concerning available offerings.

**LAT-302. Introduction to Latin  
Poetry/Dr. Wickersham**

Poems of Catullus, Ovid, Tibullus, Propertius. Stress on developing sensitivity and canons of appreciation. Three hours per week. *Four semester hours.*

**LAT-303. Historical Writers/  
Dr. Wickersham**

Caesar, Suetonius, or Tacitus. Three hours per week. *Four semester hours.*

**LAT-304. The Roman Revolution/  
Dr. Wickersham**

Speeches and letters of Cicero, and other contemporary documents. Three hours per week. *Four semester hours.*

**LAT-305. Vergil's Aeneid/  
Dr. Wickersham**

Study of the epic that defined Roman destiny and made empire acceptable to Europe. Three hours per week. *Four semester hours.*

**LAT-307. Selected Topics/  
Dr. Wickersham**

Content variable, concentration on author, period, genre and the like. Three hours per week. *Four semester hours.*

**LAT-308. Selected Topics/  
Dr. Wickersham**

Three hours per week. *Four semester hours.*

**LAT-401W. Seminar/Dr. Wickersham**

Seminars of changing content, for study of special topics, authors, genres combined with study and practice in writing. Prerequisite: English 100. Three hours per week. *Four semester hours.*

**LAT-402. Seminar/Dr. Wickersham**

Seminars of changing content, for study of special topics, authors, genres. Three hours per week. *Four semester hours.*

## CLASSICS/COMMUNICATION STUDIES AND THEATRE

### LAT-491W. **Research/Independent Work/Dr. Wickersham**

This course is open to candidates for departmental honors and to other students with the permission of the department chairperson. Concentration in the topic of the honors thesis, with study and practice of

writing. Prerequisite: English 100. *Four semester hours.*

### LAT-492. **Research/Independent Work/Dr. Wickersham**

A continuation of Latin 491. Prerequisite: Latin 491. *Four semester hours.*

## DEPARTMENT OF COMMUNICATION STUDIES AND THEATRE

*Professors Miller (Chair) Czubaroff; Assistant Professors Edwards, Scudera; Lecturers Baratz Goodman, Goldberg, Husson, Instructor Raphael.*

The Communication Studies and Theatre Department, drawing upon humanistic and social science traditions, focuses on the structure, function, criticism and creation of messages. Evolving from the spoken word, communication encompasses study of various forms of oral and written communication, visual images, and the mass media. Students examine communication processes in interpersonal, group, mass, and creative contexts. The curriculum includes integration of theory and practice and an introduction to quantitative and qualitative communication research methods. Communication Studies and Theatre prepares students for careers in the communication and information industries and is of importance to students interested in business, law, politics, human relations, and education. The department curriculum also provides a strong foundation for students planning graduate work in communication.

### **Requirements for The Major**

A major in Communication Studies and Theatre, consists of 40 semester hours of credit, including three foundation courses (two selected from CST 105, 110, and 111) and 200W; CST 201, one applied CST course selected from CST 207-277; two advanced studies courses selected from CST 311-372; Senior Seminar (CST 450W), and at least two additional CST courses. Students may fulfill the senior seminar requirement (CST 450W) with CST 491 and 492W. Majors are strongly encouraged to complete an internship (CST 381, 382, 383, or 384) and are required to complete a minor in another field of study. Up to four credits of CST 001-016 may apply towards the major. Students are encouraged to take Math 241Q to fulfill part of the college science and mathematics requirement.

### *Department curriculum:*

#### **Foundation Courses:**

CST 105, 110, 111, 200W

#### **Applied Communication Courses:**

CST 201, 207, 210, 211, 222, 240, 247, 260, 275, 277

#### **Advanced Studies Courses:**

CST 311, 325, 352, 355, 358, 362, 364, 370, 371, 372

**Senior Seminar:**

CST 450W

**Practica & Internships:**

CST 001-016, 381, 382, 383, 384.

**Directed Research:**

391, 392, 411, 412, 491, 492W

**Requirements for the minor in Communication Studies:**

A minor in communication studies consists of 20 credits, including CST 105, 110, and eight hours at the 300 level or above. CST 111, 211, 222, 277, 311 and 372 do not apply to the minor in Communication Studies. Up to four credits of CST 001-016 may apply towards the minor in Communication Studies.

**Requirements for the minor in Theatre:**

A minor concentration in theatre consists of 21 credits, including CST 111, 277, one semester of CST 001-008, and three additional courses selected from CST 211, 222, 311, 372, 411, 412. A course in dramatic literature or studies (approved by the department) may be included in the minor. Up to four credits of CST 001-008 may apply to the minor in Theatre. The theatre minor supports those seeking teaching certification, planning graduate study in the arts, and arts management.

**Majors and minors in Communication Studies and Theatre**

are expected to participate actively in and to assume leadership roles with campus organizations associated with the field of communication. These include The Grizzly, the campus newspaper; WVOU, the campus radio station; proTheatre, the campus drama group; and the Debate Society. Those who are interested in teaching should consult the education department booklet, Ursinus College Teacher Education Programs.

**Course Descriptions**

**CST-001-008. Theatre or Studio  
Production/Mr. Scudera/  
Dr. Miller**

A learning experience in which students assume responsibility for primary staff positions on major campus productions or cable-related video productions. Production requirements vary, but may include assistant to the director, stage manager, choreographer, treasurer, public relations officer, or properties manager for theatre productions and writer, director, editor or producer for television programming. Prerequisites: permission of the instructor. Graded S/U. *One semester hour.*

**CST 009-016 Newspaper Lab/  
Dr. Edwards**

A learning experience in which students assume primary responsibility for editorial positions related to the publication of The Grizzly. Prerequisites: CST 207 or permission of the instructor. Graded S/U. *One semester hour.*

**CST-105. Mass Media and Society/  
Dr. Edwards/Dr. Miller/  
Staff**

A critical and historical survey of the mass-media industries in the United States. Print, film, radio, television, and the new communication technologies are examined with regard to organization, content, control,

## COMMUNICATION STUDIES AND THEATRE

economics, and effects on their audiences. Specific attention is given to mass-media research methods and media effects on the individual and on audiences. Three hours per week. *Four semester hours.*

### **CST-110. Interpersonal Communication/ Dr. Goodman/Staff**

A study of communication processes involved in the individual's development of identity, presentation of self, and participation in interpersonal relationships and informal groups. Three hours per week. *Four semester hours.*

### **CST-111. Introduction to Theatre/ Mr. Scudera/Staff**

A study of the art of theatre through an examination of varieties of theatre space, literary genres, contributions of actors, directors, and designers, and the nature of the audience. Four hours per week. *Four semester hours.*

### **CST-200W. Communication Theory and Research/ Dr. Czubaroff/Staff**

An exploration of the concepts and models of communication common to a wide range of communication contexts, including interpersonal, group, organizational, and mass. Students are introduced to theories, research methods, and writing conventions common to the field. Prerequisites: Two from CST 105, 110, 111 (CA 111, 203, 219) one of which may be taken concurrently with CST 200W. Three hours per week. *Four semester hours.*

Students who have received credit for CA 270W may not receive credit for CST 200W.

### **CST-201. Public Speaking: Practice and Criticism/ Dr. Czubaroff/Staff**

The theory and practice of formal speaking in public settings. The course includes an introduction to rhetorical thinking, listening and speech criticism. Three hours per week. *Four semester hours.*

### **CST-207. Journalism I: Writing for the Print Media/ Dr. Edwards/Staff**

An introduction to methods of factual reporting, reviewing, interviewing, and editing of journalistic material. Students are expected to enter the course with basic word-processing skills. Classes are conduct-

ed in the college computer lab. Prerequisite Eng 100, CST 105 or permission of instructor. Four hours per week. *Four semester hours.*

### **CST-210. Video Production I/ Dr. Miller**

An overview of the principles and techniques of studio television production.

Emphasis is placed on translation of ideas into a visual format, program conceptualization, preproduction planning, script writing, critical analysis of the visual image and peer review of programs. Prerequisite: CST 105 or CA 203. Three hours of lecture and two hours of lab per week. *Four semester hours.*

### **CST-211. Shakespeare on Stage/ Staff**

A comparative study of productions and interpretations of a selection of Shakespeare plays through textual examination, oral presentation, and critical viewing. This course is also listed as English 211. Prerequisite: English 100. Three hours per week. *Four semester hours.*

### **CST-222. Oral Interpretation/Staff**

An introduction to the art of performing literature. Students examine the components of phonetics and voice production, verbal and nonverbal behavior, the relationship of interpreter and audience, and techniques of communicating meaning in solo and group performance. Prerequisite: CST 111 or permission of the instructor. Four hours per week. *Four semester hours.*

### **CST-240. Video Production II/ Dr. Miller**

An overview of the principles and techniques of single camera, electronic field production. Emphasis is placed on program conceptualization, pre-production planning, single-camera script development and post-production techniques including editing, creation of digital effects, and audio mixing. Prerequisite: CST 105. Three hours of lecture and two hours of lab per week. *Four semester hours.*

### **CST-247. Journalism II: Writing for the Electronic Media/ Dr. Edwards/Dr. Miller**

The principles and techniques of writing and editing for the electronic media. Research techniques, writing conventions, interviewing techniques, and presentation styles are included. Prerequisite CST 105.



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Three hours of lecture and two hours of lab per week. *Four semester hours.*

### **CST-260. Multimedia Production/ Dr. Miller**

An advanced level production course for students interested in developing additional expertise in digital editing and multimedia production techniques. Emphasis will be placed on newer computer-based technologies in use within the field. Prerequisite: CST 210 or CST 240. Three hours of lecture and two hours of lab per week. *Four semester hours.*

### **CST-275. Advocacy and Argument/ Dr. Czubaroff**

A study of advocacy and argument principles and processes with an emphasis on applying this knowledge in social, political, and legal contexts. Students work with various communication models including the formal persuasive speech, two-person debate, and the public forum. Prerequisite: CST 201 or permission of instructor. Three hours per week. *Four semester hours.*

### **CST-277. Acting/Mr. Scudera/Staff**

An introduction to elementary acting techniques. Students participate in acting exercises, improvisation, and scene study. Prerequisites: CST 111, 211, or 222, or permission of the instructor. Four hours per week. *Four semester hours.*

### **CST-280. Film Studies/Dr. Dole**

A study of films as texts, including an introduction to the vocabulary of the medium. Topics change yearly. This course is also listed as English 280. Prerequisite: English 100. Four hours per week. *Four semester hours.*

### **CST-298. Readings in Communication Studies and Theatre/ Staff**

Individual student-initiated study within the field on a selected topic culminating in the preparation of a critical bibliography of the works read, or other final product as determined by the faculty member supervising the readings. Prerequisites: CST 200W, major or minor in communication studies and theatre, a written project proposal, and permission of a communication studies faculty member to serve as advisor. This course is limited to second and third year majors or minors who want to explore an area of research with the expectation of continuing

that research in an upper division independent study. Offered in the fall semester. *One semester hour.*

### **CST-299. Readings in Communication Studies and Theatre/ Staff**

Content and prerequisites are the same as CST 298. Offered in the spring semester. *One semester hour.*

### **CST-311. History of Theatre/Staff**

A survey of the development of theatre, its literature, architecture, and artists, from the Greeks to the 20th century. Prerequisites: Junior standing, CST 111 and one of the following: CST 211, 222, 277; or permission of the instructor. Three hours per week. *Four semester hours.*

### **CST-325. Group Communication/ Dr. Czubaroff**

A study of communication processes in group settings. Emphasis on principles of leadership, teamwork, problem solving, conflict, and negotiation. Students work with observational methodologies. Prerequisite: CST 110. Three hours per week. *Four semester hours.*

### **CST-352. Organizational Communication/Staff**

A study of communication processes in organizational settings. Topics include formal and informal channels of communication, power structures, organizational effectiveness, and communication with a variety of publics. Field research is required. Prerequisite: CST 110. Three hours per week. *Four semester hours.*

### **CST-355. Media, Culture, and New Communication Technologies/Dr. Edwards/ Dr. Miller**

Examines the social, cultural, and political impact of new communication and information technologies on public and private communication. Traditional forms of mediated communication are examined historically for their role in shaping our society. Newer communication technologies are analyzed for their impact on and ability to transform contemporary culture. Prerequisite: CST 105. Three hours per week. *Four semester hours.*

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### **CST-358. Persuasive Communication/ Dr. Czubaroff**

A study of the basic concepts and principles of rhetoric. Case studies of persuasion are drawn from interpersonal, group, and mass media communication contexts. Students engage in rhetorical analysis and criticism. Prerequisite: CST 105, CST 110, or CST 201. Three hours per week. *Four semester hours.*

### **CST-362. Media Criticism/Dr. Edwards**

A critical study of mass-mediated messages, including the issues of gender, ethnicity, violence, and ideology. Prerequisite: CST 105. Three hours per week. *Four semester hours.*

### **CST-364. Public Communication Campaigns/Dr. Edwards**

A study of communication processes and principles in public communication campaigns. Campaign case studies are drawn from the political, health, and social movement contexts. Emphasis on persuasion and diffusion theories, campaign research and evaluation methodologies, and audience analysis. Prerequisite: CST 105. Three hours per week. *Four semester hours.*

### **CST-370. Special Topics in Mass Communication/Staff**

This course will focus on a specific topic within mass communications not covered in the other courses in the curriculum. Prerequisite: CST 105 or permission of the instructor. Three hours per week. *Four semester hours.*

### **CST-371. Special Topics in Human Communication and Rhetoric/Staff**

This course will focus on a specific topic within human communication and rhetoric not covered in the other courses in the curriculum. Prerequisite: CST 110 or permission of the instructor. Three hours per week. *Four semester hours.*

### **CST-372. Special Topics in Theatre/ Staff**

This course will focus on a specific topic within theatre not covered in the other courses in the curriculum. Prerequisite: CST 111 or permission of the instructor. Three hours per week. *Four semester hours.*

### **CST-381. Internship/Dr. Miller**

An off-campus work experience under the supervision of a faculty advisor and an on-site supervisor. Includes periodic meetings

with the faculty adviser and completion of an approved research project. Prerequisite: major or minor in CST and three courses completed in the department, Junior standing, and approval of a faculty internship adviser. Must complete a minimum of 120 hours. Offered in the fall semester. Graded S/U. *Three semester hours.*

### **CST-382. Internship/Dr. Miller**

Content, prerequisites, and requirements are the same as CST 381. Offered in the spring semester. Graded S/U. *Three semester hours.*

### **CST-383. Internship/Dr. Miller**

An off-campus work experience under the supervision of a faculty adviser and an on-site supervisor. Includes periodic meetings with the faculty adviser and completion of an approved research project. Prerequisite: major or minor in CST and three courses completed in the department, junior standing, and approval of a faculty internship adviser. Must complete a minimum of 160 hours. Offered in the fall semester. Graded S/U. *Four semester hours.*

### **CST-384. Internship/Dr. Miller**

Content, prerequisites, and requirements are the same as CST 383. Offered in the spring semester. Graded S/U. *Four semester hours.*

NOTE: Only two of the internship courses (CST 381-384) can count towards the major or towards graduation. Students considering an internship should read the college policy on internships in this catalog and review CST department requirements.

### **CST-391. Research in Communica- tion/Studies & Theatre/Staff**

Readings and independent research under the supervision of a faculty adviser. A final product and an oral presentation to the department on a specific topic in communication studies or theatre is required. Prerequisites: eight credits of course work (CST 311-372) in communication studies and theatre, demonstrated competence in the specific area of a study, a written project proposal, and permission of a department faculty member who will serve as project adviser. Offered in the fall semester. *Four semester hours.*

### **CST-392. Research in Communica- tion Studies & Theatre/Staff**

Content, prerequisites, and requirements are the same as CST 391. Offered in spring semester. *Four semester hours.*

## COMMUNICATION STUDIES AND THEATRE/EAST ASIAN STUDIES

### **CST-411. Directed Studies in Communication and Theatre/Staff**

Advanced individual work on a project related to the study of communication or theatre. Prerequisites: eight credits of 300-400 level course work in communication studies and theatre, demonstrated competence in the specific area of study, a written project proposal, and permission of a department faculty member who will serve as project adviser. Offered in fall semester. *Four semester hours.*

### **CST-412 Directed Studies in Communication and Theatre/Staff**

Content, prerequisites, and requirements are the same as CST 411. Offered in spring semester. *Four semester hours.*

### **CST-450W. Senior Seminar/ Dr. Miller/Dr. Czubaroff**

The integrated conclusion of the departmental curriculum with emphasis on research and writing in the communication field. Prerequisites: English 100, CST 200W; CST 201; two advanced studies courses (CST 311 to CST 372). Three hours per week. *Four semester hours.*

### **CST-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the departmental chair. *Four semester hours.*

### **CST-492W. Research/Independent Work/Staff**

A continuation of CST-491. Prerequisite: CST 491. *Four semester hours.*

## **EAST ASIAN STUDIES**

*Professors Clark (Coordinator), DeCatur, and Hood; Instructors Inoue and Nishio.*

Acquaintance with cultures other than our own is an integral part of both a liberal education and preparation for a career in a variety of fields, including business, law, government, or teaching. The major and minor in East Asian Studies are interdisciplinary programs drawing on offerings in several departments, but emphasizing history, culture, politics, literature and language. The programs are designed to provide an introduction to the cultures of China and Japan; in reflection of Ursinus' relationship with our sister school, Tohoku Gakuin University (TGU), located in Sendai, Japan, offerings emphasize the latter.

In addition to the courses offered on the Ursinus campus, students either majoring or minoring in East Asian Studies are encouraged to take advantage of off-campus study-abroad opportunities, including the Ursinus Summer Study in Japan (EAS-301) and the Semester in Japan (EAS-399), both offered in conjunction with TGU. Students seeking intensive language experience should consult with the language faculty about appropriate overseas or summer-intensive programs.

*Teacher certification:* Ursinus is one of only a small number of institutions in Pennsylvania to offer certification for secondary-school teaching in Japanese language. For requirements, candidates should consult the Ursinus College Teacher Education Programs booklet prepared by the Education Department as well as their Japanese language instructor. Certification requires passing a language competency examination.

## EAST ASIAN STUDIES

*Requirements for Majors:* A major in East Asian Studies consists of 1) a minimum of 12 hours of Japanese language study beyond the 100 level (NOTE: EAS majors are encouraged to complete all or some of this requirement either through study abroad or summer-intensive programs, including the college-sponsored Semester Study in Japan program [EAS-399]; regarding major credit, see "note" below); 2) 12 credits from History 241, 243; Politics 346, 347; or English 223, 224; 3) a capstone experience either in an approved seminar in History, Politics, or Modern Language, EAS-400W, or EAS-491W/492W; and 4) 12 additional credits from the following courses (NOTE: at least eight credits must be at the 300-level): Anthropology-200/206 (taken in conjunction), 351, 371, 372 (NOTE: except for 200/206, Anthropology courses must have the permission of the East Asian Studies coordinator), EAS-299, 301, 314, 398, 399, English 223, 224, History 241, 243, 343, 344, 361, Politics 346, 347, 353, and Philosophy and Religion 211.

NOTE: For the purposes of the EAS major, students who complete EAS 398-399 will receive 13 credits toward #4 above. The appropriate language credit for off-campus study will be determined by Ursinus faculty.

*Requirements for Minors:* A minor concentration in East Asian Studies consists of 20 credits from courses dealing with East Asia. Twelve credits must come from History 241, 243; Politics 346, 347; or English 223, 224. The remaining credits must come from the following: EAS-299, 301, 314, 398, 399; Japanese 100, 111, 112, 211, 212, 301, 328; History 241, 243, 343, 344, 361; Philosophy and Religion 211; or Politics 346, 347, 353.

### **EAS-299. Topics in East Asian Studies/Staff**

An interdisciplinary topics course focusing on aspects of East Asian culture, the specific topic to be chosen by the instructor. To be taught in English by guest faculty. Four hours per week. *Four semester hours.*

### **EAS-301. Summer Study in Japan/Staff**

A five-week course offered in collaboration with Tohoku Gakuin University in Sendai, Japan. This interdisciplinary course comprises three weeks of classroom instruction in Sendai on selected topics of Japanese culture and society, plus an introduction to conversational Japanese language, followed by a two-week tour of Japan. Instruction is in English and is provided by the faculty of Tohoku Gakuin University as well as members of the Ursinus faculty. Offered annually mid-May through June. Not open to incoming freshmen. *Four semester hours.*

### **EAS-314. Japanese Culture and Society/Staff**

Understanding contemporary Japanese society through the traditional arts, music, theater, education and social structures. Taught in English. Four hours per week. *Four semester hours.*

### **EAS-398. Study in Japan Pre-Departure Program/Staff**

A introduction to basic themes of Japanese history, culture, society. This is a required course for all Ursinus students participating in either EAS-399, Semester in Japan, or EAS-301, Summer Study in Japan. Enrollment by permission of the instructor. The course meets 75 minutes/week for six weeks after spring break. *One semester hour.*

**EAS-399. Semester in Japan/Staff**  
Ursinus College has a long-standing tradition of exchange programs with Tohoku Gakuin university, our sister university in Sendai, Japan. The fall semester exchange program provides Ursinus students with the opportu-

## EAST ASIAN STUDIES/ECONOMICS AND BUSINESS ADMINISTRATION

nity to spend the fall semester at Tohoku Gakuin. In addition to intensive Japanese language training, classes are offered in a variety of topics. Except for the language classes, courses are taught in English. The program is open to all majors. Admission is competitive.

NOTE: Grades (Pass/Fail) earned in the Semester in Japan program will not count in the student's cumulative GPA at Ursinus. Prerequisite: EAS-398 and two semesters of Japanese language. *Fifteen semester hours.*

### **EAS-400W. Research in East Asian Studies/Staff**

A capstone course for East Asian Studies majors only, involving a supervised indepen-

dent research project and an oral presentation to EAS faculty. Prior approval of the East Asian Studies coordinator and supervising faculty required. *Four semester hours.*

### **EAS-491W. Research/Independent Work**

This course is open to candidates for honors in East Asian Studies and to other students with the permission of the East Asian Studies coordinator. *Four semester hours.*

### **EAS-492W. Research/Independent Work**

A continuation of EAS-491W. Prerequisite: 491W. *Four semester hours.*

## ECONOMICS AND BUSINESS ADMINISTRATION

*Professor O'Neill, Associate Professors Bowers, Economopoulos (Chair); Harris; Assistant Professors Cirka, McLennan.*

In our rapidly changing global environment, students majoring in the Economics and Business Administration department receive an excellent background in the structure and functioning of the economy. Our integrated curriculum offers students the opportunity to build a solid foundation in business skills and decision making. Students gain an understanding of the fundamental tools of economics and business, especially through the use of the computer. Our majors are well prepared to enter careers in accounting, business, economic and business research, government or international affairs, or to enroll in graduate and law school.

### **Requirements for Majors**

All students majoring in the department must complete a minimum of 40 semester hours in the department including EcBA 100, 105, 251, 252 and 305. Students must select from three tracks: business (concentrating in either accounting/finance or management/marketing), international economics and business, or economics and public policy. Within each business concentration, students are required to take two prescribed courses appropriate to the area of specialization, two additional electives and a business capstone course. For the international economics and business track, students take courses in finance, marketing, international trade and finance and a business capstone course. In addition, students must take courses in a modern language and politics or history. For the economics and public policy track, students must select two electives from a prescribed set of courses, two additional electives and a public policy capstone course. Independent research or an internship may fulfill one of the additional electives (four semester hours) in the major. In addition, majors must take either Math 105 or 111, or Math 107 and 108.

## **ECONOMICS AND BUSINESS ADMINISTRATION**

### **I. BUSINESS TRACK**

#### **ACCOUNTING/FINANCE CONCENTRATION.**

This concentration is designed for students interested in pursuing a business career in public or corporate accounting, finance, banking or financial analysis. It also provides excellent preparation for graduate study in business or law.

Students must take EcBA 100, 105, 205, 251, 252, 305, 306 or 326 and any two additional EcBA electives. EcBA 410W fulfills the capstone experience. Students who seek eligibility to take the Certified Public Accountant examination in Pennsylvania must complete additional credit hours in accounting beyond EcBA 105 and 205, eight (8) of which may count towards elective credits in the major. The department advises students interested in public accounting in states other than Pennsylvania to contact their respective state boards to obtain current course requirements.

#### **MARKETING/MANAGEMENT CONCENTRATION**

This concentration offers a range of courses designed for students interested in the management of organizations and the principles and practices of marketing. It also provides excellent preparation for graduate study in business or law.

Students must take EcBA 100, 105, 218, 251, 252, 305, 307 and any two additional EcBA electives. EcBA 410W fulfills the capstone experience.

### **II. INTERNATIONAL ECONOMICS AND BUSINESS TRACK**

This track is designed for students wishing to pursue a career in international business, consulting or law. It combines courses in economics and business, a modern language, and politics or history. It is highly recommended that students live abroad at least one semester and pursue an internship that semester.

Students must take EcBA 100, 105, 251, 252, 305, 306 or 326, 307, 308 and 309. The capstone experience is fulfilled by EcBA 410W. Students choosing a modern language other than Japanese must take 201 and 318 within the chosen language. Students choosing Japanese must take 211 and 212. In addition, students must take Politics 100 and either Politics 242 or 252 or History 207. Additional courses in modern languages are also highly recommended.

### **III. ECONOMICS AND PUBLIC POLICY TRACK**

This track is recommended for students wishing to gain a broad understanding of the economy and the impact on private industry and government of different policy choices. It also provides excellent preparation for careers in the private sector and state and federal government agencies as well as graduate study in economics, business or law.

## ECONOMICS AND BUSINESS ADMINISTRATION

Students must take EcBA 100, 105, 251, 252, 305, two electives chosen from following courses: 231, 308, 309, 316, 332, 333, and any two additional EcBA electives. EcBA 420W fulfills the capstone experience. The department advises students who plan to pursue graduate study in economics to consult with their adviser to obtain current course requirements of specific graduate schools.

### IV. SECONDARY SCHOOL TEACHING CERTIFICATION

This program satisfies the Pennsylvania state requirements for secondary certification in social studies. Substantial further coursework outside of economics and education is required in order to prepare the student for subjects taught in the secondary curriculum. Students who wish teaching certification should consult their departmental adviser and the chair of the department of education as early as possible, preferably at the end of the freshman year. Students and their advisers should consult the education department booklet, Ursinus College Teacher Education Programs.

### Requirements for Minors

A minor concentration in accounting consists of EcBA 100, 105, 203, 204, 205 and one elective chosen from 206, 301, or 304. A minor in business administration consists of EcBA 100, 105, 205 or 218, 251, and one elective chosen from 306, 307 or 326, and Math 105 or 111, or Math 107 and 108. A minor in economics consists of EcBA 100, 105, 251, 252, and one elective chosen from 308, 309 or 316, and Math 105 or 111, or Math 107 and 108.

Note: Students majoring in Economics and Business Administration may not elect minors in the department.

Note: Courses in economics, business administration and accounting in the Ursinus Center for Continuous Learning may have different prerequisites and coverage from those in the department of Economics and Business Administration. Thus, courses in the Center for Continuous Learning may be used for credit toward the major in Economics and Business Administration only with the prior written permission of the department chair.

#### ECBA-100. Introduction to Economics/ Staff

An introduction to the economic reasoning underlying the behavioral decisions of individuals, firms and managers. Topics also include the study of inflation, unemployment, deficits and government policies affecting people and business. Four hours per week. *Four semester hours.*

#### ECBA-105. Financial Accounting/ Mrs. Harris/Mr. Bowers

An introduction to financial accounting principles. Covers theoretical and practical

issues related to the accounting and reporting of financial data in the income statement, balance sheet and statement of cash flows. Spreadsheet applications of accounting problems. EcBA 100 is a prerequisite or corequisite. Three hours of lecture; two hours of computer laboratory per week. *Four semester hours.*

#### ECBA-203. Intermediate Financial Accounting-I/Mrs. Harris/ Mr. Bowers

An advanced study of accounting concepts and the content and usefulness of financial

## ECONOMICS AND BUSINESS ADMINISTRATION

statements. In depth coverage of the accounting and reporting issues related to asset measurement and income determination. Additional coverage of current developments of the Financial Accounting Standards Board. Spreadsheet applications of accounting problems. Prerequisites: EcBA 100, 105. Four hours per week. *Four semester hours.*

### **ECBA-204. Intermediate Financial Accounting-II/Mrs. Harris/ Mr. Bowers**

Continuation of EcBA 203. In depth coverage of the accounting and reporting issues related to investing and financing activities, cash flows and other selected topics. Additional coverage of current developments of the Financial Accounting Standards Board. Spreadsheet applications of accounting problems. Prerequisite: EcBA 203. Four hours per week. *Four semester hours.*

### **ECBA-205. Managerial Accounting/ Mrs. Harris**

An introduction to the cost elements — material, labor and overhead — in job order and process cost systems. The role of cost data, including standard costs and budgets in managerial planning, cost control and decision making are discussed. Selected topics related to performance evaluation and managerial decision making. Research paper and/or written case studies are used. Prerequisites: EcBA 100, 105. Three hours per week. *Four semester hours.*

### **ECBA-206. Federal Income Tax Accounting and Planning/ Mr. Bowers**

An introduction to the federal income tax code as it relates to individuals and business entities. The course covers income, deductions and losses, determination of tax liability and other selected topics. Computer applications of corporate and individual tax preparation are used. Research paper and/or written case studies are used. Prerequisite: EcBA 100, 105. Three hours per week. *Four semester hours.*

### **ECBA-218. Management/Cirka**

The study of the multi-faceted management and decision making process in the global business environment. Includes an examination of planning, organizing, directing and controlling functions and discussion of management theories. The course blends theory and practical applications through the use of case studies and the examination of cur-

rent management problems and practices. Prerequisite: EcBA 100. Three hours per week. *Four semester hours.*

### **ECBA-231. Economics of Environment and Natural Resources/ Dr. McLennan**

Economic analysis is used to inform, analyze, evaluate current environmental and natural resource policy decisions. Analyses of environmental problems use cost-benefit or efficiency criteria. Topics include externalities, public goods, common property rights, and sustainability. Prerequisite: EcBA-100. Three hours per week. *Four semester hours.*

### **ECBA-251. Microeconomic Theory and Decision Making/ Dr. O'Neill/Dr. McLennan**

The study of the economic behavior of consumers, firms and managers. Optimal resource usage for corporations, not-for-profit organizations and government agencies is discussed. Topics also include market analysis, pricing decisions, forecasting and risk analysis. Prerequisites: EcBA 100, 105. Math 105 or 111, or Math 107 and 108. Three hours of lecture; two hours of laboratory per week. *Four semester hours.*

### **ECBA-252. Macroeconomic Theory and Decision Making/ Dr. Economopoulos/ Dr. O'Neill**

The study of inflation, unemployment and economic growth within the context of the world economy. An examination of how exchange rates, taxes and Federal Reserve policies affect business and the performance of the U.S. economy. Business forecasting based on macroeconomic indicators is discussed. Prerequisite: EcBA 100. Three hours of lecture; two hours of laboratory per week. *Four semester hours.*

### **ECBA-301. Partnerships and Consolidations/Mr. Bowers**

The study and analysis of accounting for partnerships, corporate expansion, business combinations, consolidations, government, fiduciary and not-for-profit accounting. Use of spreadsheet programs. Research paper and/or written case studies are used. Prerequisite: EcBA 204. Three hours per week. *Four semester hours.*

### **ECBA-304. Theory and Practice of Auditing/Mrs. Harris**

An introduction to the audit environment through the study of generally accepted



## ECONOMICS AND BUSINESS ADMINISTRATION

auditing standards, professional ethics, legal liability. An in-depth coverage of the external audit function including the planning process, the study and evaluation of internal control, audit procedures and the preparation of audit reports. Research paper and/or written case studies are used. Prerequisites: EcBA 204; Math 241 or EcBA 305. Three hours per week. *Four semester hours.*

**ECBA-305Q. Research Methods For Economics, and Business/  
Dr. Economopoulos/  
Dr. O'Neill**

Statistical and econometric methods used in analyzing marketing, financial, accounting and economic data. Topics include: hypothesis testing, trend analysis, forecasting and multivariate estimation of behavioral decisions by consumers and firms. Laboratory experience includes statistical software usage. A research paper presenting original data analysis is required. Prerequisites: EcBA 251, 252. Three hours of lecture; two hours of laboratory per week. *Four semester hours.*

**ECBA-306. Corporate Finance/  
Dr. Economopoulos/  
Mrs. Harris**

A study of the basic principles underlying the financing of the corporate structure. Short- and long-term financing instruments. Expansion, failure, and reorganization of the corporation. Case studies and semester project utilizing financial analysis and forecasting techniques. Proficiency in spreadsheet analysis is required. Prerequisite: EcBA 251. Three hours per week. *Four semester hours.*

**ECBA-307. Marketing/Cirka**

The study of market analysis, consumer behavior and the four components of the marketing mix-product, price, promotion and distribution. Marketing issues will be examined through case studies and discussion of current marketing problems and practices. Extensive written semester project based on marketing research and analytical techniques. Proficiency in spreadsheet analysis is required. Prerequisite: EcBA 251. Three hours per week. *Four semester hours.*

**ECBA-308. International Trade Theory and Policy/Dr. O'Neill**

An analysis of world trade using the classical, neoclassical Heckscher-Ohlin and post-

modern theories of trade. Extensive commercial policy analysis concerning the use of tariffs, quotas, voluntary restraints and non-tariff barriers. Ongoing discussion analyzing current trade problems, prescriptions and legislation. Independent written work required. Prerequisite: EcBA 251. Three hours per week. *Four semester hours.*

**ECBA-309. International Finance Theory and Policy/  
Dr. O'Neill**

An examination of balance of payments theory using fixed and flexible exchange rate regimes. Analysis of the effects of fiscal and monetary policies given alternative presumptions concerning capital mobility, expectations formation and international policy coordination. Systematic analysis of current international financial policies. Independent written work required. Prerequisite: EcBA 252. Three hours per week. *Four semester hours.*

**ECBA-316. Financial Markets and Institutions/  
Dr. Economopoulos**

A theoretical and empirical study of major financial intermediaries, their sources and uses of funds, their operative and regulatory constraints, and their impact on aggregate economic activity. Independent written work required. Prerequisite: EcBA 252. Three hours per week. *Four semester hours.*

**ECBA-326. Managerial Finance/  
Dr. Economopoulos**

The examination of short-term and long-term financial decisions of managers. Microeconomic theory is applied to financial planning decisions of businesses. Topics include management of cash, receivables, inventory, long-term sources of financing, debt-equity decisions, and mergers and acquisitions. A written research project is required. Prerequisite: EcBA 251. Three hours per week. *Four semester hours.*

**ECBA-327. Market Analysis and Strategy/Staff**

This course examines the organizational structure of markets, how firms can strategically market themselves and the relationship between market structure and firm behavior. Topics include the economic aspects of pricing strategies, advertising, inter and intra market rivalries, entry and barriers to new markets, and regulations. A marketing research paper is required. Prerequisites:

## ECONOMICS AND BUSINESS ADMINISTRATION

EcBA 305, 307. Three hours per week. *Four semester hours.*

### **ECBA-332. Health Economics/ Dr. O'Neill**

Discussion of various topics in this ever-growing field such as the supply and demand of health care, health professionals' services, facilities and pharmaceuticals. Government policies concerning Medicare and Medicaid are analyzed. International comparisons of health care delivery systems are discussed. Independent written work required. Prerequisite: EcBA 251. Three hours per week. *Four semester hours.*

### **ECBA-333. Topics in Economics and Public Policy/Staff**

Contemporary issues are discussed using a cross-disciplinary approach. Microeconomic and macroeconomic analyses are undertaken within a historical context. Independent written work required. Prerequisites: EcBA 251 and 252, or permission of instructor. Three hours per week. *Four semester hours.*

### **ECBA-381. Internship/Staff**

An off-campus academic/work experience under the supervision of a faculty internship adviser and an on-site supervisor. Students are required to document their experiences in a written journal. A written research paper/project is required. Contact the chair of the department for further details. Prerequisites: junior or senior standing, completed departmental track requirements, and prior written approval of a faculty internship adviser. Eight to 10 hours per week. *Four semester hours.*

NOTE: Students may fulfill one elective (*Four semester hours*) in the major by choosing either an internship or independent research.

### **ECBA-391. Independent Research/Staff**

Preparation of an independent research paper. Prerequisites: junior or senior standing, completed departmental track requirements, and permission of department chair are required. *Four semester hours.*

NOTE: Students may fulfill one elective (*Four semester hours*) in the major by choosing either independent research or an internship.

### **ECBA-410W. Business Strategy and Research/Cirka**

The study of business strategy, the process of its formulation and implementation. Marketing, financial and operational research are used in analyzing and developing alternative strategies. Teams will study firms, produce a written comprehensive strategic plan, and give an oral presentation using computer technology. Students on the international economics and business track will pursue research and analysis with an international focus. Prerequisites: EcBA 305, senior standing, and either EcBA 205 and 306 or EcBA 218 and 307, or EcBA 307, 308 and 309 (one of which may be concurrent) and 306 or 326. Three hours per week. *Four semester hours.*

### **ECBA-420W. Economics and Public Policy Research/ Dr. McLennan**

An advanced study of public policy issues utilizing theoretical and empirical readings from current economic journals. Preparation and oral presentation of a research paper applying theoretical models and analyzing data is required. Prerequisites: EcBA 305, senior standing, and two courses chosen from the following: 231, 308, 309, 316, 332, 333. Three hours per week. *Four semester hours.*

### **ECBA-491. Research/Independent Work/Staff**

Preparation of an independent research paper. Open only to candidates for departmental honors or to fourth-year majors with the permission of the department chair. *Four semester hours.*

### **ECBA-492W. Research/Independent Work/Staff**

A continuation of EcBA 491. Prerequisite: EcBA 491. *Four semester hours.*

NOTE: The completion of EcBA 491 and 492W satisfies the capstone requirement (EcBA 410W or 420W).

**EDUCATION**

*Associate Professor Gross (Chair), Lecturers Florio, Sandler.*

The Education Department offers an interdisciplinary approach into the study of the history, philosophy, psychology, and methodology of teaching and learning in public and private schools of the United States. Primary sources of classical influences, dating back to Plato and Aristotle, are analyzed in terms of progressive initiatives of more recent education thinkers and reforms. Field experiences in every course help students to ground theory into the logistics and realities of the present day classroom. With an emphasis on action research, reflectivity, and social agency, coursework entails inductive, collaborative, and active learning through student-generated interests, readings, projects, and presentations.

The Education Department is a service department which does not offer a major in education, but does offer teaching certification in thirteen disciplines, a minor in elementary education, and a minor in secondary education. Students who are considering careers in educational settings or who seek to broaden their liberal arts knowledge base often enroll in the introductory or elective Education courses to ascertain the extent of their interest in pursuing additional coursework.

**Teaching Certification**

The Teaching Certification program prepares students for entry-level knowledge and skills for public or private school positions in the following disciplines:

Biology (7-12)	German (K-12)	Mathematics (7-12)
Chemistry (7-12)	Health and Physical	Physics (7-12)
English (7-12)	Education (K-12)	Social Studies (7-12)
French (K-12)	Japanese (K-12)	Spanish (K-12)
General Science (7-12)	Latin (K-12)	

Major departments list required courses, as well as individual department GPA requirements for eligibility to student teach. The Education Department requires an overall GPA of 2.50 and a GPA of 3.0 in the following Education courses in order to be eligible to student teach: EDUC 202, ED/PSYC 265, EDUC 302, and EDUC 344. Prior to student teaching, candidates must take CST 201 and receive a major department recommendation.

Student teaching occurs in the fall only, during what is called the Professional Semester, beginning with the day the local school district convenes and continuing for the entire College semester. The only courses student teachers may take during this semester are EDUC 405/493, 441, and the 443 section(s) applicable to the certification area(s) sought. Candidates must earn at least a B- in student teaching, demonstrate good moral stand-

## EDUCATION

ing, satisfy all certification program requirements, and pass the necessary NTE examinations in order for the College to recommend certification.

The Pennsylvania Department of Education will certify candidates for the provisional Instructional I certificate upon recommendation of the Education Chair who serves as the State Certification Officer for the College. (Pennsylvania requires U.S. citizenship for certification, except for the teaching of foreign languages.) Reciprocal agreements extend certification eligibility to most states, but some states require additional certification tests. Candidates who wish to teach outside Pennsylvania should contact state Education Departments for further information. Eligibility for permanent certification in any state depends upon successful full-time teaching and professional development requirements which vary among individual states.

### Minors in Education

Students from any major who wish to broaden their knowledge about the educational history and current trends in the public school system may choose to minor in Education. Though Certification students do not need to minor in Education, they may elect to take the two additional courses which would earn a minor, either in elementary or secondary education.

#### 1) Minor in Elementary Education

Students who expect to pursue careers in which they will work with pre-school or elementary school-age children may minor in Elementary Education. This option can strengthen eligibility for admission to graduate school in such areas as elementary school teaching, school guidance or psychology, speech pathology, etc. Since certification students in ESS or modern Languages become certified K-12, they often elect to complete this minor, particularly if they would prefer to teach younger grades. Course requirements include EDUC 202, ED/PSYC 265, EDUC 344, ED/PSYC 345, and one from EDUC 402, 434, or 446. (PSYC 330 is recommended.)

#### 2) Minor in Secondary Education

Students who express interest in working with adolescents often decide to minor in Secondary Education. Course requirements include EDUC 202, ED/PSYC 265, EDUC 344, ED/PSCYC 355, and one from EDUC 402, 434, or 446. (PSYC 330 is recommended.)

#### EDUC-202. Introduction to Education/Ms. Florio

An introductory course for those who plan to teach or who wish to know more, as citizens, about their public schools. It deals with the organization and characteristics of the American school system, noting the characteristics of teaching as a profession and the teacher's responsibility in the class-

room and the school. Field experience required. Three hours per week. *Four semester hours.*

#### EDUC/PSYC-265. Educational Psychology/Staff

Educational application of psychological concepts will be addressed. The focus is on the psychological processes involved in

learning and behavior management in the classroom, but the course includes a survey of cognitive and social development (the same course as Psychology 265).

Prerequisite: Psychology 100. Three hours per week. *Four semester hours.*

**EDUC-302. Education Practicum/Staff**

In preparation for student teaching the following semester, this course focuses upon field experiences to familiarize students with district, building, and departmental cultures and procedures. Prerequisites: EDUC 202, Education Department approval. Minimum of three hours a week. *Two semester hours.*

**EDUC-344. Philosophy of Education/  
Dr. Gross**

A study of the philosophical and historical foundations of education, with reference to current conditions and practices in the public schools. Field experience required. Three hours per week. *Four semester hours.*

**EDUC-351. Research/Staff**

Readings and fieldwork designed to introduce students to research methods in education. Students select topics and write a proposal which must be approved by an education advisor. Regular meetings and progress reports and a final paper are required. Prerequisites: EDUC-202 and EDUC-265. *One semester hour.*

**EDUC-352. Research/Staff**

Same as EDUC-351 but offered in spring. *One semester hour.*

**EDUC-402. Identity and Diversity/  
Dr. Gross**

Analysis and exploration of individual influences and filters regarding racial and gender identity issues through examining and exchanging multiple viewpoints and perspectives in preparation for diversity in the professions, with particular emphasis on teaching. Spring semester only. Three hours per week. *Four semester hours.*

**EDUC-405. Student Teaching/Staff**

A laboratory course consisting of observation and student teaching. Supervision is provided by faculty in the department of education and normally by other members of the College community in cooperation with teachers from local schools. Conferences and critiques occur between College faculty and student teachers. The course is open only to fourth-year students

who meet published academic criteria. In order to receive the College's recommendation for teacher certification, the student teacher must earn a grade of at least B- in this course. Prerequisites: Education 202, 302, 344; PSYC 265; CST 201 (CA 100). Taken with EDUC 441 and 443, as part of the Professional (fall) Semester. *Eleven semester hours.*

**EDUC-434. Curriculum Seminar/  
Dr. Gross**

A study of selected topics relevant to reforming education in today's schools, with special attention to curriculum development. Includes field research. Three hours per week. *Four semester hours.*

**EDUC-441. General Teaching  
Methods/Dr. Gross**

Principles of secondary school teaching; general methods of instruction; challenges of the beginning teacher; function and use of instructional materials. Taken with EDUC 405, 443, as part of the Professional (fall) Semester. Prerequisites: EDUC 202, 302, 344; PSYC 265. Three hours per week. *Three semester hours.*

**EDUC-443. Special Teaching  
Methods/Staff**

This course, which supplements the general methods course (441), provides specialized instruction in teaching one of the subject areas offered in the College's teacher education programs. Sections are offered in each discipline and are noted on student records according to the following scheme. (C) Classical Languages [Latin]; (E) English; (L) Languages, Modern [French, German, Japanese, and Spanish]; (M) Mathematics; (S) Science [Biology, Chemistry, General Science, and Physics]; (T) Teaching English as a Second Language (TESL); (X) Social Studies. Sections are taught by experts in the subject fields from the public schools. Prerequisites: EDUC 202, 302, 344; PSYC 265. Taken with EDUC 441, 405, as part of the Professional (fall) Semester. Two hours per week. *Two semester hours.*

**EDUC-446. Issues and Trends in  
Contemporary  
Education/Dr. Gross**

A study of current issues with reference to educational history on the one hand, and to trends and educational futures on the other. At present the course addresses such topics

## EDUCATION/ENGLISH

as values education, the so-called quality vs. equity dilemma, accountability, and the reform of teacher education. Includes some field research. Three hours per week. *Four semester hours.*

### **EDUC-491. Research/Independent Work**

Independent investigation of an aspect of teaching, using both the library to examine relevant literature and the school setting as

a laboratory for applying theory. Oral progress reports and a major paper are required. Written consent of the research adviser and departmental staff must be presented at the time of registration. *Four semester hours.*

### **EDUC-492. Research/Independent Work**

Same as Education 491, but offered in the spring semester. *Four semester hours.*

## ENGLISH

*Professors* Lionarons (*Chair*), Perreten, Schroeder, Volkmer, Wickersham; *Associate Professors* Dole, Kelley, *Assistant Professor* Pesta; *Assistant Professors (Visiting)* Keita, Martinez; *Lecturers* Agostinelli, Bates, Jaroff.

### **Requirements for Majors**

Majors must complete at least ten courses in English beyond English 100, including: 200W, 201, 202, and 203; at least three 300-level colloquia, including one covering literature before 1800 and one covering literature after 1800; and a 400-level seminar or an honors paper. Students planning to do honors also need English 301 or 221W. CST 207 may also be included in the major.

Students who want to be certified to teach English must fulfill all departmental requirements for an English major. Their courses should include literary genres, themes, chronologies, and major writers. In addition, students working toward certification must select the following courses: English 208 and 214; CST 201; either IDS 101, English 226 or 230; and CST 222 or English 206 or 240. Candidates for certification must also participate in student journalism or theater activities. Students and their advisers should consult the education department booklet, Ursinus College Teacher Education Programs.

### **Requirements for Minors**

A minor concentration in English consists of at least five courses in English beyond English 100, including English 200W, Introduction to Literary Studies. One writing course (English 205-210) may be included in the English minor; at least three courses (aside from English 200W) must be literature, film, or language courses. A minor concentration in Creative Writing consists of at least five English courses beyond English 100, including English 402 and at least three of the following writing courses: 205, 206, 208, 209 (one or more sections), or CST 207. One literature course may count toward the creative writing minor. Participation in student publications (*The Grizzly* or *The Lantern*) for a minimum of two semesters is also required.

**ENGL-100. First-Year Composition/  
Staff**

Expository writing workshop, with attention to all the stages of the writing process from generating ideas to refining drafts. Students will write frequent short papers. The course will also introduce students to the proper use of outside sources. Three hours per week. *Four semester hours.*

**ENGL-200W. Introduction to Literary  
Studies/Staff**

Normally, the first course for an English major. Includes an introduction to critical vocabulary; study of the genres of poetry, prose, and drama; critical reading practices; a general introduction to literary theory; conventions of the literary research paper; and frequent practice of careful critical writing. Enrollment limited to 16. Prerequisite: English 100 or LS 100. Four hours per week. *Four semester hours.*

Note: Students who have taken English 221W cannot receive credit for 200W.

**ENGL-201. British Literature to  
1800/Dr. Lionarons,  
Dr. Perreten, Dr. Pesta**

Survey of British literature from the Medieval and Renaissance periods through Neoclassicism. Covers Chaucer, Shakespeare, Milton, Pope, and others, presented in historical context. Prerequisite: English 100. Four hours per week. *Four semester hours.*

Note: Students who have taken English 215 or 216 cannot receive credit for English 201.

**ENGL-202. British Literature Since  
1800/Dr. Dole, Dr. Perreten**

Survey of British literature from Romanticism and Victorianism through Modernism and Postmodernism. Covers Wordsworth, Keats, Tennyson, Yeats, Joyce, Woolf and others, presented in historical context. Prerequisite: English 201. Four hours per week. *Four semester hours.*

Note: Students who have taken English 217 or 218 cannot receive credit for English 202.

**ENGL-203. American Literature  
Survey/Dr. Kelley/  
Dr. Schroeder**

Survey of American literature from the Puritans to the present, with attention to minority and women writers as well as more traditional figures. Prerequisite: English 100. Four hours per week. *Four semester hours.*

Note: Students who have taken English 219 or 220 cannot receive credit for 203.

**ENGL-205. Fiction Writing/  
Dr. Volkmer**

A beginning course in the writing of fiction, with special attention to the short story. The student will study technical aspects of the craft and masterpieces of the genre. The student will write short stories, receive critical responses, and make extensive revisions. Enrollment limited to 12 students. Prerequisite: English 100. Three hours per week. *Four semester hours.*

**ENGL-206. Poetry Writing/  
Dr. Volkmer/Ms. Keita/  
Ms. Martinec**

A beginning course in the writing of poetry. The student will study selected works, learn traditional forms of the lyric, and write original verse in those forms. The student will make extensive revisions, based on responses from peers and the professor. Enrollment limited to 12 students. Prerequisite: English 100. Three hours per week. *Four semester hours.*

**ENGL-208. Advanced Expository  
Writing/Dr. Perreten/  
Dr. Schroeder**

Practice, on an advanced level, in the writing and critical evaluation of nonfictional prose. Enrollment is limited to 12 students per section. Prerequisite: English 100. Three hours per week. *Four semester hours.*

**ENGL-209. Special Topics in Creative  
Writing/Staff**

A workshop course in an area of creative writing not normally covered in English 205 and 206. Topics will vary. Enrollment limited to 12 students. Prerequisite: English 100. Three hours per week. *Four semester hours.*

**ENGL-211.\* Shakespeare on Stage  
(See CST 211)****ENGL-214 Linguistics and Modern  
Grammar/Dr. Lionarons**

An introduction to synchronic and diachronic linguistics, stressing the ways in which linguistic structures promote effective communication. Recommended for future writers and lawyers as well as English teachers. Prerequisite: English 100. Four hours per week. *Four semester hours.*

\* This course not offered in 2000-2001

## ENGLISH

### **ENGL-221W. Literary Criticism and its Application/Dr. Kelley/ Dr. Lionarons**

A workshop in critical writing about literature, organized around the study of traditional and specialized approaches to fiction, drama, and poetry. Open to juniors and seniors only. Four hours per week. *Four semester hours.*

NOTE: Students who have taken English 201W cannot receive credit for 221W.

### **ENGL-222. African-American Literature/Dr. Kelley/ Dr. Schroeder**

An introduction to the literature written by black American writers and the criticism of that literature in its different stages of development. Prerequisites: English 100; LS 100. Three hours per week. *Four semester hours.*

### **ENGL-223. Chinese Literature in Translation\***

Critical reading of representative works from Chinese literature in modern translations. This survey in a variety of genres begins with literature from the 12th century B.C.E. and ends with modern Chinese literature. Three hours per week. *Four semester hours.*

### **ENGL-224. Japanese Literature in Translation\***

Critical reading of representative works from Japanese literature in modern translations. This survey in a variety of genres begins with literature from the Ancient Period (Man'yōshū) and ends with modern novels and short stories. Three hours per week. *Four semester hours.*

### **ENGL-226. Mythology/Dr. Wickersham**

Illustrated lectures survey the tales of gods and heroes in Greek legend, from the creation of the world to the end of the age of myth—the foundations of Western literature. Interpretive approaches are also studied. Prerequisites: English 100; LS 100. Three hours per week. *Four semester hours.*

### **ENGL-228. Women's Literature/ Dr. Dole/Dr. Kelley/ Dr. Lionarons/Dr. Schroeder**

A cross-period study of literature by British and American women, paying attention to issues of canon formation and feminist literary theory. Prerequisites: English 100; LS 100. Three hours per week. *Four semester hours.*

### **ENGL-230. Topics in Classical Studies/ Dr. Wickersham**

A thorough study of one area of ancient Greek or Roman experience, thought, and literature. Reading in translation of comedy or epic or tragedy. Prerequisites: English 100; LS 100. Three hours per week. *Four semester hours.*

### **ENGL-232. Studies in Satire/ Dr. Perreten**

An interdisciplinary (multimedia/intertextual) study of the modes of satire and critical commentary on satire, concentrating on the 18th and 20th centuries. Prerequisites: English 100 and LS 100. Three hours per week. *Four semester hours.*

### **ENGL-234. King Arthur/Dr. Lionarons**

A course in medieval and modern literature and film dealing with King Arthur and the legends that surround him. Prerequisite: English 100. Three hours per week. Four credit hours.

### **ENGL-240. Shakespeare/Dr. Pesta**

The reading of Shakespeare's principal plays, and the study of their background. Prerequisites: English-100, LS-100. Three hours per week. *Four semester hours.*

Note: Students who have taken English 309 or 310 will not receive credit for English 240.

### **ENGL-262.**

### **ENV/ENG-262. The Environment in Literature/Dr. Perreten**

Students in this course will study literature inspired by a variety of environments. Readings will range from classic essays "Nature" by Emerson and "Walking" by Thoreau to Terry Tempest Williams' 1991 environmental/autobiographical study, "Refuge: An Unnatural History of Family and Place." "Ecocriticism," the study of the relationship between literature and the physical environment will provide the theoretical framework for the course. Writing for the class will be half-analytical (critical responses to texts and a research paper), and half-original, creative student writings about their own environments. Prerequisites: English 100; Liberal Studies 100. Three hours per week. *Four semester hours.*

### **ENGL-280. Film Studies/Dr. Dole**

A study of films as texts, including an introduction to the vocabulary of the medium. Topics change yearly. This course is also



listed as CST 280. Prerequisite: English 100.  
Four hours per week. *Four semester hours.*

NOTE: Students who have taken English 225 will not receive credit for English 280.

### **Advanced Colloquia in English**

These advanced courses are designed for junior and senior English majors, or for minors or other students with a serious interest in literary studies. Each colloquium will be limited to 16 students, will build on knowledge gained in lower-level courses, and will give the student opportunity for substantive research. To assure that students are prepared to work on an advanced level, each colloquium will have as prerequisites both English 200W and the appropriate survey course (from the series 201-203), or permission of the instructor.

English majors must take at least three colloquia, including one covering literature before 1800 and one covering literature after 1800.

In order to provide students with as many choices as possible in course selection, the English Department will let student and faculty interest dictate the topics of each semester's colloquia. Descriptions of the upcoming colloquia will be published each semester, along with the prerequisites for each colloquium.

#### **Colloquia will cover topics such as these:**

Imag(in)ing America through Literature and Photography  
 Women Writers of the Middle Ages  
 Blues and Literature  
 The Hero in Medieval Literature  
 Modern British Poetry  
 The Beats  
 Renaissance Tragedy: Shakespeare and Other Playwrights  
 Women and Theater  
 African-American Drama  
 Turning Literature into Film  
 The Harlem Renaissance  
 Werewolves and other Shapeshifters  
 Chaucer  
 Biography and Autobiography  
 War Literature  
 Coming of Age Stories from Around the World  
 Upward Mobility: A study of the American Novel  
 Postmodern Fictions  
 Novels of the Night: The Gothic Novel in Britain and America  
 Ekphrastic Literature  
 Ulysses' Journey from Homer to Joyce

## ENGLISH/ENVIRONMENTAL STUDIES

### ENGL-301. **Literary Theory/Dr. Kelley, Dr. Lionarons**

The study of theoretical approaches to literary texts, such as feminism, poststructuralism, and cultural studies. Recommended for all English majors, but especially for students considering teaching or graduate studies in English; required for English honors candidates. Prerequisites: English 200W and one of 201-203; or permission of the instructor.

### ENGL-381A. **Internship/Staff**

An off-campus academic/work experience under the supervision of an internship adviser and an onsite supervisor, involving eight to 10 hours weekly. Discuss details with the chair of the department. Prerequisites: Junior or senior standing and the approval of an internship adviser. *Three semester hours.*

### ENGL-381B. **Internship/Staff**

An off-campus academic/work experience under the supervision of an internship adviser and an onsite supervisor, involving 11 to 14 hours weekly. Discuss details with the chair of the department. Prerequisites: Junior or senior standing and the approval of an internship adviser. *Four semester hours.*

### ENGL-391. **Independent Study in English/Staff**

Independent work, either scholarly or creative, under the supervision of a faculty adviser. A substantial final written project is required. Prerequisites: at least three English classes beyond 100; a written project proposal; and permission of a department faculty member who will serve as adviser. *Four semester hours.*

### ENGL-402. **Advanced Creative Writing/Dr. Volkmer**

A workshop course in creative writing offering the student the opportunity to receive significant critical responses on extended works of poetry or prose fiction. Enrollment limited to 12 students. Prerequisite: at least two of the following: English 205, 206, 209 (one or more sections), CST-207; or permission of the instructor. Three hours per week. *Four semester hours.*

### ENGL-441 through 444.

#### **Seminar in Advanced Studies in Literature/Staff**

A study of a genre, a major figure, or a special topic. Prerequisites: English 200W; 221W or 301; senior or second-semester junior standing. This course will satisfy the College requirement for a capstone experience and an oral presentation in the major. Three hours per week. *Four semester hours.*

### ENGL-491. **Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the department chair. Pre- or corequisite: English 301 or 221W. *Four semester hours.*

### ENGL-492. **Research/Independent Work/Staff**

A continuation of course 491. Prerequisite: 491. When this course is used to fulfill the capstone experience in the major, the student will be required to give a substantial oral presentation of the research project, either to the departmental honor society or to another group approved by the project adviser. *Four semester hours.*

## ENVIRONMENTAL STUDIES

*Professors Perreten, Rideout, Sidie, Small; Associate Professors Dawley, Kane, Oboler, Price; Assistant Professor McLennan.*

Students majoring in Environmental Studies (ENV) study environmental issues from a combined science, policy and aesthetic perspective. The major is interdisciplinary in nature and students are required to complete courses in several disciplines in the natural and social sciences and/or humanities to investigate and analyze the scientific, economic, cultural, political, ethical and aesthetic issues surrounding our relationship with the natural world. This major provides preparation for graduate study and

careers in environmental sciences or policy, law, social work, journalism, government, city planning and landscape architecture.

**Requirements for Majors**

All students majoring in Environmental Studies must complete a minimum of 32 semester hours in environmental studies courses including ENV-100 and at least one of ENV-481W, 482W, 491W or 492W. Environmental Studies majors are required to complete this major in addition to another major.

Students majoring in ENV must complete at least two courses from ENV/ECBA-231, ENV/ANTH-252, ENV/ENGL-262, ENV/PSYC-282, ENV/PHIL-315, and ENV/POL-326 and at least two courses from ENV/GEOL-105Q, ENV/CHEM-352 with ENV/CHEM-352a, ENV/BIO-250, ENV/BIO-310, ENV/BIO-320, ENV/BIO-330 and ENV/BIO-415W.

Independent research or an internship may fulfill one course requirement (four semester hours) for the major. Student must have completed 12 semester hours of environmental studies courses including ENV-100; or have permission of their advisor, to be eligible for independent research or an internship.

**Requirements for Minors**

All students minoring in Environmental Studies must complete a minimum of 20 semester hours in environmental studies courses including ENV-100 and at least one course from ENV/ECBA-231, ENV/ANTH-252, ENV/ENG-262, ENV/PSYC-282, ENV/PHIL-315, and ENV/POL-326, and at least one course from ENV/GEOL-105Q, ENV/CHEM-352 with ENV/CHEM-352a, ENV/BIO-250, ENV/BIO-310, ENV/BIO-320, ENV/BIO-330, ENV/BIO-415W.

Independent research or an internship may each fulfill one course requirement (four semester hours) for the minor. Student must have completed 12 semester hours of environmental studies courses including ENV-100; or have permission of their advisor, to be eligible for independent research or an internship.

**ENV-100. Issues in Environmental Studies/Staff**

An introductory interdisciplinary course with readings and research on topics common to all areas of environmental studies. Issues will include (but are not limited to) the effects of global warming and the international response to it, the benefits and costs of biodiversity, scarcity of natural resources and suggestions on how to allocate them, the safety and regulation of various products. Discussion and reports will be based on current primary literature. Three hours per week. *Four semester hours.*

**ENV/GEOL-105Q. Environmental Geology/Staff**

An introduction to environmental geosciences. Includes a study of the earth's environmental systems: lithosphere, hydro-sphere, atmosphere, plate tectonics, rock types, mineral resources, volcanism, earthquakes, weathering, soils, surface water, ground water, climate, weather, oceans, energy, environmental change. Same as GEOL-105Q. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

## ENVIRONMENTAL STUDIES

**ENV/BIO-250. Environmental Biology/Dr. Sidie**

A study of the biological basis of environmental issues. Includes ecosystems, communities, populations, water, energy, geologic resources, biodiversity, weather/climate, pollution, agriculture/hunger, soil resources/pests, solid/toxic hazardous waste, toxicology, land use. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture. Two hours of lab/discussion/simulations/writing per week. *Four semester hours.*

**ENV/ANTH-252. Peoples and Their Environments/Dr. Oboler**

Human cultural patterns and social institutions are adaptations to particular physical and social environments, and also have impacts on those environments. This course is concerned with the relationship between environments and subsistence systems on the one hand, and social/political institutions and belief systems on the other, using case studies from a variety of traditional societies. We will also consider the relationship between the global ecosystem and problems of Third World development, patterns of peasant production, causes and consequences of rapid population growth, and the fate of indigenous peoples. Prerequisites: Anthropology 100 or permission of the instructor. Same as Anthropology 252. Three hours per week. *Four semester hours.*

**ENV/ENG-262. The Environment in Literature/Dr. Perreten**

Students in this course will study literature inspired by a variety of environments. Readings will range from classic essays "Nature" by Emerson and "Walking" by Thoreau to Terry Tempest Williams' 1991 environmental/autobiographical study, "Refuge: An Unnatural History of Family and Place." Ecocriticism, the study of the relationship between literature and the physical environment will provide the theoretical framework for the course. Writing for the class will be half-analytical (critical responses to texts and a research paper), and half-original, creative student writings about their own environments. Same as English 262. Prerequisites: English 100, Liberal Studies 100. Three hours per week. *Four semester hours.*

**ENV/PSYC-282. Environmental Psychology/Dr. Rideout**

Study of the interrelationship between human behavior and experience and the manmade and natural environments. Topics include: influences of weather, climate, noise, crowding, and stress; personal space and territoriality; work, leisure, and learning environments; the natural environment and behavioral solutions to environmental problems. Same as Psychology 282. Prerequisite: Psychology 100. Three hours per week. *Four semester hours.*

**ENV/BIO-310. Biological Oceanography/Dr. Goddard, Dr. Sidie**

A study of the biological bases of ocean science. Topics discussed include: ocean basins, seawater physics and chemistry, currents, waves, tides, upwelling zones, tidal rhythms in organisms, ocean habitats/biota, marine virology, marine microbiology, plankton, trophic relationships, hydrothermal vent communities, coral reefs. Prerequisite: Biology 213; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. (Course may be conducted in part at a marine field station). *Four semester hours.*

**ENV/PHIL-315. Environmental Ethics/Staff**

The central issue in environmental ethics concerns what things in nature have moral standing and how conflicts of interest among them are to be resolved. After an introduction to ethical theory, topics to be covered include anthropocentrism, the moral status of non-human sentient beings, preservation of endangered species and the wilderness, holism versus individualism, and the land ethic. Three hours per week. *Four semester hours.*

**ENV/BIO-320. Biology of the Neotropics/Drs. E. Dawley, R. Dawley**

A field study of Costa Rican tropical habitats including rain forests, montane forests, seasonally dry forests, and wetlands conducted at research sites throughout the county. Topics include diversity and natural history of key plants and animals, ecological interactions and evolutionary processes, and con-

## ENVIRONMENTAL STUDIES

ervation. May include side trips to cloud forests or coral reefs. Prerequisite: Permission of instructor and Biology 111WQ. Field investigations accompanied by readings, lectures, and a directed research project. Course will meet 15 hours on campus and three weeks in Costa Rica between the Fall and Spring semesters. *Four semester hours.*

### ENV/POL-326. Environmental Law/Dr. Kane

The study of various state, national, and international legal patterns that have arisen to address environmental concerns. The environmental field will be used to examine the nature and effectiveness of civil, criminal, and administrative action to address a complicated and important social issue. Topics will include federal administrative law; international trade and environmental regulation; control of toxic substances and hazardous wastes; the impact of scientific uncertainty on regulation; federal regulatory programs; civil liability under federal regulations; citizen suits; and the preservation of natural areas. Same as Politics 326. Prerequisites: Politics 100, Politics 218 for Politics and International Relations majors or permission of the instructor. Three hours per week. *Four semester hours.*

### ENV/BIO-330. Marine Biology/Dr. Sidie

A field-oriented study of the important marine habitats, including pelagic and benthic zones, and intertidal communities. Topics include marine biodiversity - plants, protists, invertebrates, vertebrates; marine ecology; primary production in the sea; estuaries; plankton; nekton; marine mammals; ocean pollution. Prerequisite: Permission of the instructor and Biology 111WQ. Lecture and field investigations. (Course conducted in part at a marine field station.) *Four semester hours.*

### ENV-350. Topics in Environmental Studies/Staff

A study of a contemporary issue or specific subject area relating to the environment. Topics are often cross-disciplinary and vary according to the special interests of students and faculty. Potential topics include: energy and the environment; landscape architecture; urban environmental studies; and birds in their habitats. Prerequisite: permission of the instructor.

Independent written work required. Lab and field work required in some cases. Three hours of class per week. *Four semester hours.*

### ENV/CHEM-352. Environmental Chemistry/Dr. Price

The study of the atmosphere, the greenhouse effect, ozone depletion and carbon fluorochlorides, air pollution, acid rain, natural and drinking waters, chlorinated organics, and heavy metals in the environment from a regional and global perspective. Other topics include the treatment of wastewater, toxic and nuclear wastes as well as energy production and its environmental consequences. Same as Chemistry 352. Prerequisites: Chemistry 106 and 206. Three hours per week. Three semester hours.

### ENV/CHEM-352a. Laboratory in Environmental Chemistry/Staff

Laboratory work related to Chemistry 352 involving the investigation of local air quality, rain water, natural waters and soil using common analytical techniques. Offered spring semester of even-numbered years. Same as Chemistry 352a. Prerequisites: Chemistry 106a, 206aQ and 352 (concurrently). Three hours per week. One semester hour.

### ENV-381. Internship/Staff

An off-campus academic/work experience under the supervision of a faculty internship advisor and an on-site supervisor. Students must have completed 12 semester hours of environmental studies courses including ENV-100; or have permission of their advisor, to be eligible for an internship. Students must document their experience with a written product. *Four semester hours.*

### ENV/BIO-415W. Ecology/Dr. Small

Studies of the interrelationships between organisms and their environments that determine their distribution and abundance in natural systems. Aspects of energy flow, biotic and abiotic limits, population growth and community organization are considered in the context of the ecosystem. Laboratories include local field work and emphasize techniques for collecting and analyzing data. Prerequisites: Biology 111Q and 112Q, or permission of the instructor. Three hours of lecture, three hours of laboratory per week. *Four semester hours.*

## ENVIRONMENTAL STUDIES/EXERCISE AND SPORT SCIENCE

### ENV-481W. Research/Independent Work/Staff

This course of independent research is the capstone experience for Environmental Studies majors. Students may choose a topic from separate academic divisions and work with two mentors from separate academic divisions to conduct independent research. Students must have completed 12 semester hours of environmental studies courses including ENV-100; or have permission of their advisor, to be eligible for independent research. *Four semester hours.*

### ENV-482W. Research/Independent Work/Staff

See course description for ENV-481W.

### ENV-491W. Research/Independent Work/Staff

Students who are eligible for departmental honors can complete independent research work in this course. The course qualifies as a capstone experience for Environmental Studies majors. Students work closely with two mentors from separate academic divisions to conduct independent research. Students must have completed 12 semester hours of environmental studies courses including ENV-100; or have permission of their advisor, to be eligible for independent research. *Four semester hours.*

### ENV-492W. Research/Independent Work/Staff

See course description for ENV-491W.

## EXERCISE AND SPORT SCIENCE

*Professors* Borsdorf, Davidson; *Associate Professors* Chlad, Engstrom, Wailgum (*Chair*); *Lecturers* Erb, Guenther, Kashow, Kuntz, Magnus, Moliken, Wright, Zenorini.

The Department of Exercise and Sport Science serves dual functions: (1) to provide for all students a diversified service program of activities for all students and (2) to offer a comprehensive course of study in the following areas: Exercise Science (e.g., allied health school preparation, corporate fitness certifications, preparation for graduate programs in exercise physiology, preparation for wellness-fitness promotion, personal training certifications, etc.) and Health and Physical Education teacher preparation.

Included in the activity service program are (a) a variety of basic and advanced lifetime leisure activity courses, (b) a popular intramural sports program for men and women (more than 50 percent of the student body participated in this program), and (c) recreational facilities for students to use in their leisure time. Construction has begun on a new field house fitness facility, lobby for both the U.S. Field Hockey Association Hall of Fame and Ursinus College Hall of Fame for Athletes, separate Athletic and Exercise and Sport Science Department office complexes, as well as, renovations to existing locker rooms, equipment and athletic training facilities

The educational goals of the department are to introduce students to current concepts in the field of Exercise Science, to expose them to a variety of work-related experiences, and to involve them in various aspects of research. These experiences will foster a sense of responsibility and develop critical, independent thinking consistent with the objectives of a liberal arts education.

**Requirements for Majors**

Students majoring in the ESS Department must take the following courses: ESS 100, 220, 334, 351, and 352; complete the required courses in a major area of concentration; and complete both the oral and capstone experience requirements by electing to take one of the following courses: ESS 412, 465, 478W or 491.

**I. Teaching of Health and Physical Education**

This program is recommended for those preparing to become teachers. The required courses are ESS 232W, 333, 355, 356, 462, 464, one of the following ESS 167, 235, or 267; IDS 350; Bio 305 and eight semester hours of activities. A minimum of six semester hours of activity courses must be taken at the 200 level. Students in the teacher certification program in Health and Physical Education will be required to complete a course in analysis and movement for each of the following activity areas: aquatics, dance, individual and dual sports, and team sports. The students will be introduced to the following concepts for each activity area: identification and analysis of critical elements, teaching progressions, activity strategies, and safety and organizational implications.

NOTE: Students seeking K-12 teaching certification in health and physical education from the Commonwealth of Pennsylvania must include the following courses of study in their program: EDUC. 202, 265, 302, 405, 344, 441 and CST 201. Candidates for teacher certification must earn a departmental GPA of at least a 2.50 and receive a departmental recommendation. Students and their advisers should consult the Education Department booklet, Ursinus College Teacher Education Programs, for further information.

**II. Exercise Science**

A flexible program of study recommended for those students preparing for careers in the following areas: allied health sciences, corporate fitness, exercise physiology, wellness-fitness promotion, etc. Students must take one of the following:

ESS 167, 235 or 267, and a minimum of twelve credit hours of ESS theory courses (one course must be a "W" course), a minimum of two credit hours of ESS activity courses, and a minimum of eleven credit hours of laboratory courses in the natural sciences.

NOTE: It is highly recommended that students obtain graduate catalogs no later than the end of their sophomore year to determine individual pre-requisite needs for graduate school. Students seeking admission to graduate allied health programs need to elect to take BIO 111Q, 112Q; CHEM 105/105a, 106/106a or 206/206a; MATH 111 &/or 241Q; Physics 111Q, 112; and various courses from the Humanities and Social Science Divisions.

## EXERCISE AND SPORTS SCIENCE

### Minor Concentrations

A minor concentration in coaching consists of ESS 100, 220, 267, 365, 366, and 225/226 and one approved two-credit activity course. (21 semester hours). ESS 363 is recommended.

A minor concentration in wellness/fitness education consists of ESS 100, 167, 333, 334, 346, and 347 (21 semester hours). BIO 111WQ, 212W, 305 and 306 are strongly recommended.

A minor concentration in athletic training consists of 220, 267, 278, 334, 351, and 378 (21 semester hours). BIO 111WQ, 212W, 305 and 306 are strongly recommended.

### Activities Courses

Students may elect activity courses listed at the 100 level. Students wishing to elect activity courses may not register for more than one activity course in any given semester and no more than three hours of activity courses may count toward the 128 semester hours required for graduation. The intent of 100 level courses will be to develop basic skills, improve fitness, foster the concepts of wellness, provide enjoyment, and develop recreational and social competencies through participation in lifetime sports and leisure activities.

Upper level activity courses are designed for ESS Majors and will focus on movement analysis and teaching progression and techniques. Students with special interest or skills may elect activity courses at the 200 level with the permission of the ESS Department.

**ESS-101. Contemporary Dance/Staff**  
*One semester hour.* (Offered even fall semesters.)

**ESS-102. Aerobics/Staff**  
Two hours per week. *One semester hour.*

**ESS-103. Modern Dance/Staff**  
*One semester hour.* (Offered odd spring semesters.)

**ESS-107. Basic Swimming/  
Dr. Davidson**  
Course is designed to meet the needs of the non-swimmer and the beginning swimmer. Emphasis will be on skill development and the ARC Basic Water Safety program. *One semester hour.*

**ESS-108. Intermediate  
Swimming/Dr. Davidson**  
Course is designed to meet the need of the intermediate level swimmer. Emphasis will be on skill development and the A.R.C. Emergency Water Safety program. *One semester hour.*

**ESS-109. Judo and Self-Defense/  
Dr. Davidson**  
This course will provide students with current theory and practice in self-defense. avoidance, escape and fight back skills are presented. Basic judo skill including falling techniques and throws are developed. Two hours per week. *One semester hour.*

**ESS-113. Racquet Sports  
(Basic Skills)/Staff**  
*One semester hour.*

**ESS-114. Racquet Sports  
(Advanced Skills)/Staff**  
*One semester hour.*

**ESS-115. Wellness I/Staff**  
Walking and stretching activities for the promotion of physical fitness. Weight control techniques through diet and exercise; stress management skills. *One semester hour.*



## EXERCISE AND SPORTS SCIENCE

**ESS-116. Golf, Archery, and Bowling/  
Staff**

*One semester hour.*

**ESS-121. Volleyball (Basic Skills)/  
Staff**

*One semester hour.*

**ESS-122. Volleyball (Advanced  
Skills)/Staff**

*One semester hour.*

**ESS-137. Weight Training and  
Physical Conditioning/  
Mr. Guenther**

*One semester hour.*

**ESS-140. Stress Management/  
Dr. Borsdorf**

Problem-solving principles that underlie stress management will be introduced, coping strategies for managing stress will be explored, and a personal stress management plan will be developed. Three hours per week. *Two semester hours.*

**ESS-147. Body Recall/Dr. Borsdorf**

A physical fitness course appropriate for all ages and fitness levels. Activities will utilize a variety of recreational equipment to enhance body movement and flexibility. In addition, the mechanics of everyday activities will be explored with respect to the benefits derived in a daily physical maintenance program. Students preparing to work with a geriatric population are encouraged to enroll in this course. Three hours per week. *Two semester hours.*

**ESS-150. Special Activities/Staff**

This course will focus on an activity not included in the current curriculum, e.g. cycling and adventure activities. Two hours per week. *One semester hour.*

**ESS-180. Surface Anatomy: Lower  
Extremity/Dr. Wailgum**

This course focuses on the lower extremity. It will identify selected anatomical landmarks, examine the dermatome scheme, and demonstrate proper muscle function testing for the hip, knee, ankle, and foot joints. The lumbar-sacral plexus and its peripheral innervations will be reviewed. Prerequisite: permission of the instructor. One hour of lecture, one hour of lab. *One semester hour.* (Offered every even spring semester.)

**ESS-182. Surface Anatomy: Upper  
Extremity/Dr. Wailgum**

This course focuses on the upper extremity. It will identify selected anatomical landmarks, examine the dermatome scheme, and demonstrate proper muscle function testing for the trunk, shoulder girdle, shoulder, elbow, wrist, and hand joints. The brachial plexus and its peripheral innervations will be reviewed. Prerequisite: Permission of the instructor. One hour of lecture and one hour of lab. *One semester hour.* (Offered every odd spring semester.)

**ESS-200. Field Hockey and Lacrosse/  
Ms. Moliken**

Three hours per week. *Two semester hours.* (Offered odd fall semesters)

**ESS-204. Non-Traditional Team  
Sports/Dr. Borsdorf**

This course will introduce team sports typically included in physical education and recreation programs. The course will promote movement skills and cardiovascular fitness through participation in team handball, speedball, ultimate frisbee and other team sports. Two hours per week. *One semester hour.* (Offered even fall semesters)

**ESS-220. Critical Components of  
Conditioning/Dr. Engstrom**

This course is designed to introduce students to the concepts of conditioning as it relates to muscular strength and endurance as well as various forms of cardiovascular training. The course will emphasize the identification and analysis of the critical elements of weight training exercises, teaching progressions involved in conditioning, and safety and organizational implications of conditioning. Three hours per week. *Two semester hours.* (Offered every spring semester)

**ESS-221. Analysis and Movement  
of Dance/Staff**

This course is designed to introduce students to the fundamentals of teaching dance. The course will include instruction in aerobics, step aerobics, and various forms of social dancing including line dancing, contemporary dances, as well as folk and square dancing. One hour of lecture and two hours of laboratory experiences. *Two semester hours.* (Offered odd spring semesters)

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### ESS-222. Football, Soccer, and Volleyball/Staff

This course is designed to introduce strategies and concepts, critical to successful teaching and coaching experiences. Skill analysis, teaching progressions and organizational considerations will be emphasized. Three hours per week. *Two semester hours.* (Offered odd spring semesters)

### ESS-225. Basic Movement Techniques in Individual and Team Sports/Ms. Moliken

This course analyzes the basic concepts of movement and decision-making that are crucial to athletic success in all the most popular sports. Basic principles such as spatial awareness, timing, visual skills, angles of movement, and reading cues will be thoroughly discussed and practiced. The students will learn the importance of consistently including these concepts when coaching youngsters in drills, small games and full scrimmages and games. The class will equally consist of practical participation, discussions and video analysis. Three hours per week. *Two semester hours.* (Offered even spring semesters)

### ESS-226. Analysis and Movement in Individual and Team Sports/Ms. Moliken

This course analyzes the more complex concepts of movement and decision-making that are needed for young athletes as they move up the competitive ladder. The students will learn to teach the movement and decision-making that is required for "off the ball" play, to understand the subtleties of deception and to learn how to make more complex "reads." The class will consist of practical participation, discussions and a great deal of video analysis. Prerequisite: ESS 225 or by permission of the instructor. Three hours per week. *Two semester hours.* (Offered odd spring semesters)

### ESS-233. Racquet Sports Staff

Three times per week. *Two semester hours* (Offered even fall semesters)

### ESS-234. A.R.C. Water Safety Instructor/Dr. Davidson

Course leads to A.R.C. certification as a Water Safety Instructor (WSI). Three hours per week. *Two semester hours.* (Offered every fall semester)

### ESS-235. A.R.C. Lifeguarding/Dr. Davidson

Course leads to certification in American Red Cross standard first aid, CPR for Professional Rescuers, Lifeguard and lifeguarding Instructor. Three hours per week. *Two semester hours.* (Offered every spring semester)

## Theory Courses

### ESS-100. Concepts of Wellness and Fitness/Dr. Borsdorf

An exploration of the various dimensions of wellness. Emphasis will be on the concepts of total fitness and wellness. Wellness/fitness self testing, self evaluation, and self-care skills will be developed. Three hours per week. *Four semester hours.* (Offered every semester)

Note: This course should be completed by ESS majors in either the freshman or sophomore year.

### ESS-167. Community CPR and Standard First Aid/Staff

This course meets the requirements for the American Red Cross Standard First aid and Community CPR Certifications. One hour lecture, two hours lab. *One semester hour.* (Offered every spring semester)

### ESS-232W. Current Trends in Health/Dr. Davidson

This course will focus on the promotion of health education as it relates to the individual and the community at large. Special emphasis will be placed upon family and community health, consumer health, and environmental health issues. This course will function as one of the writing intensive courses for students in the ESS Department. Prerequisite: English 100 and the permission of the department. Three hours per week. *Four semester hours.* (Offered every fall semester)

### ESS-245. Leadership in High-Risk and Adventure Activities/Mr. Erb

Basic concepts of the leadership role in high-risk and adventure activities. A historical perspective, philosophical background, educational strategies and safety considerations will be discussed. Particular attention is given to the integration of environmental concerns, problem solving, and adventure activities in high-risk and adventure programming. Two hours lecture and three

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hours laboratory per week. *Four semester hours.* (Offered every fall semester)

**ESS-261W. Research Methods in Health and Human Performance/Dr. Wailgum**

This course will provide an introduction to research methods in health and human performance. Topics include: research design, selecting and defining a problem, literature review, procedures for obtaining data, analyzing and presenting data, and related computer applications. Prerequisites: English 100 and ESS 100. Three hours per week. *Four semester hours* (Offered every fall semester).

**ESS-267. Advanced Skills in Emergency Care/Dr. Davidson**

This course leads to advanced certification in A.R.C. first aid and CPR skills. Introductory level concepts for the care and prevention of athletic injuries will be reviewed. This course is specifically designed for those students wishing to obtain coaching certification or for those students (e.g., lifeguards, athletic trainers, fitness supervisors, etc.) wishing to obtain advanced life support skills. Three hours per week. Three semester hours. (Offered every fall semester).

Note: This course will fulfill the first aid requirement for ESS majors.

**ESS-278 Care and Prevention of Athletic Injuries/Ms. Wright**

This course identifies injury/illness risk factors associated with participation in competitive athletics. The prevention, mechanisms, and care of common sports injuries are emphasized. Prerequisite: Biology 317 or the permission of the instructor. Three hours of lecture and two hours of laboratory per week. *Four semester hours.* (Offered every spring semester).

**ESS-300. Death, Dying, and Grief: A Wellness Perspective/Dr. Borsdorf**

This course will provide students and the instructor the opportunity for an open examination of death, and to help prepare each person to better cope with the inevitable death and grief situations that all encounter throughout life. A wellness perspective which enters into decisions surrounding death, dying and bereavement will

be explored. Three hours per week. *Four semester hours.* (Even spring semesters beginning in 2000)

**ESS-301. Gender Issues in Health and Sport/Dr. Borsdorf**

This course will allow students to examine gender differences and the ramifications on health and sports. Topics to be explored will include: gender effects on body composition and weight control, bone mineralization patterns, cardiorespiratory function, thermoregulation, personal and sexual dimensions of health, chronic conditions, and aging influences/repercussions. Four hours per week. *Four semester hours.* (Offered even fall semesters).

**ESS-333. Drugs & Alcohol-Use and Abuse in Modern Society/Dr. Borsdorf**

The significance of drug and alcohol use, misuse, and abuse in society is analyzed. Drugs and drug use today are addressed from several perspectives—historical, psychological, physiological, pharmacological, sociological, and legal. Prevention, intervention, treatment, and rehabilitation of drug and alcohol abuse is also discussed. Prerequisite: ESS 100. Four hours per week. *Four semester hours* (Offered every fall semester).

**ESS-334. Nutrition/Ms. Chlad**

The relationship between nutrition, exercise, and weight control will be examined from various perspectives: scientific principles, consumer protection, and holistic health concepts. The course will explore the principles of nutrition and the process of metabolism. Prerequisite: ESS 100 or the permission of the instructor. Four hours per week. *Four semester hours.* (Offered every spring semester).

**ESS-346. Wellness/Fitness Program Management/Dr. Borsdorf**

A general survey of the fitness, wellness and recreation movements. Theories relevant to the three areas and their interrelationship will be explored. Particular attention will be given to methods and techniques of marketing and to developing and implementing wellness and fitness programs. Prerequisites: ESS 100 or the permission of the instructor. Three hours per week. *Four semester hours.* (Offered even spring semesters).

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### ESS-347. **Wellness/Fitness for Adult Populations/Dr. Borsdorf**

An analysis of the techniques used to confront the problems and needs of an adult population through wellness/fitness services. This course will focus upon the aging process and its relationship to physical fitness and other wellness dimensions. Special emphasis will be placed upon identifying alterable aging processes and developing strategies for improving overall wellness in various adult populations. Participants will become familiar with a variety of wellness programs, fundamental movement sequences, and incentive activities designed to enhance the physical, emotional, and social health of all adults, with a special emphasis on the senior population. Three hours per week. *Four semester hours.* (Offered odd fall semesters).

### ESS 351. **Structural Kinesiology/Dr. Wailgum**

This course will examine how the neuromuscular and skeletal systems create volitional movement patterns. The execution of various sports skills will be utilized to identify types of joint motion, types of muscle tension, and agonist vs antagonist muscle groups. Prerequisite: Bio 317 or permission of the instructor. Three hours of lecture and two hours of laboratory. *Four semester hours.* (Offered every fall semester).

### ESS-352. **Exercise Physiology/Dr. Wailgum**

The study of the physiological alterations and adjustments which occur in response to physical performance. Prerequisite: ESS 351 or permission of the instructor. Three hours lecture and two hours laboratory. *Four semester hours.* (Offered every spring semester).

### ESS-353. **Introduction to Biomechanics/Dr. Davidson**

This course will introduce students to the fundamental principles of biomechanics by examining how the successful completion of sports skills are governed by the laws of physics. Videotaping and computer assisted analysis of the execution of various sports skills will serve as the laboratory component of this course. Prerequisite: ESS 261W, 351 and Phys 111Q. Three hours of lecture and three hours of lab per week. *Four semester hours.* (Offered even spring semesters).

### ESS-355. **Methods of Teaching Secondary Health and Physical Education./Dr. Engstrom**

This course will examine various philosophies of teaching health and physical education. Students will be introduced to various curriculum models in the discipline with special emphasis on outdoor and adventure education designs. Students will participate in adventure activities, group initiatives, cooperative games and problem solving activities. Principles, methods, and strategies of teaching health and physical education at the secondary level will be established. Students will explore assessment strategies, unit and lesson planning, and classroom management intervention. Three hours of lecture and two hours of laboratory. *Four semester hours.* (Offered every spring semester).

### ESS-356. **Methods of Teaching Elementary Health and Physical Education/Dr. Engstrom**

This course will investigate the history and development of teaching health and physical education. Principles, methods and strategies of teaching health and physical education at the elementary level will be established. This course includes analysis of the fundamental motor skills, examining elementary health issues and establishing developmentally appropriate instructional strategies for elementary games and gymnastics. Students will explore the spectrum of teaching styles, unit and lesson planning, and process-product analysis of learning experiences. Three hours of lecture and two hours of laboratory. *Four semester hours.* (Offered every fall semester)

### ESS-363. **Officiating/Ms. Kashow**

This course is designed for prospective teachers, coaches, and officials. Emphasis is placed on understanding, interpreting, and applying rules in team and individual sports. There will be specific instruction in soccer and basketball (fall), volleyball and softball (spring). Additionally, there will be an overview of peripheral issues that affect officiating. Three hours per week. *Three semester hours.* (Offered every semester).

### ESS-365. **Philosophy and Principles of Coaching/Ms. Moliken**

This course is designed to develop a whole-

## EXERCISE AND SPORTS SCIENCE

some and positive philosophy for coaching young players. Students will learn how to teach techniques, tactics and strategies to various age groups. Organizing practices, setting individual and personal goals, evaluating players and basic administrative responsibilities will be covered. The class will consist of lectures, discussions, reports and practical coaching experiences. Three hours per week. *Four semester hours.* (Offered every spring semester).

### **ESS-366W. Sport Psychology/ Mr. Thompson**

A comprehensive examination of sport psychology that defines the role of personality, performance, and anxiety, and how intervention techniques can enhance performance. Social-psychological aspects of sport psychology such as aggression, group dynamics, and leadership are presented, and their application in practical situations is a major part of written work and group discussions. Three hours per week. *Four semester hours* (Offered every spring semester).

### **ESS-378. Recognition and Evaluation of Athletic Injuries/Ms. Chlad**

This course focuses on the recognition and evaluation of athletic injuries. It reviews the historical, postural, and functional assessment of the major joints involved in athletic injuries. Prerequisites: ESS 178, 278 and Biology 317, 318. Three hours lecture and two hours lab. *Four semester hours.* (Offered every fall semester).

### **ESS-381. Exercise Science Practicum/Staff**

A practicum experience in a hospital, business, coaching position, clinic and/or geriatric care center under the supervision of a practicum advisor and an on-site supervisor. An inservice project is required. Each student is expected to be on-site a minimum of 160 hours per semester. Graded S/U. *Four semester hours.*

**ESS-391. Independent Study/Staff**  
Introduction to fundamental research procedures and data manipulation in Exercise and Sports Science under the direction of a faculty member. Prerequisite ESS 100 and permission of the faculty supervisor. One semester hour. (Offered every semester).

### **ESS-412. Exercise Science Internship/Staff**

A work-related experience within a Wellness/Allied Health setting, at a staff-approved site. A research paper, one oral presentation, and a minimum of one inservice presentation are required. Each student is expected to be on-site a minimum of 160 hours per semester. Open to senior ESS majors with permission of his/her advisor. Graded S/U. *Four semester hours.*

### **ESS-462. Administration in Exercise and Sport Science/ Dr. Davidson**

A study of the administrative theory, principles, and problems in exercise and sports science. Three hours per week. *Four semester hours.* (Offered every spring semester).

### **ESS-464. Adapted Physical Education/Dr. Davidson**

An analysis of conditions affecting the development of children with special needs. Methods for selecting and classifying such individuals will be explored, and strategies for adapting activities to meet the needs of differently-abled persons will be addressed and experienced. ESS major or permission of instructor. Three hours per week. *Four semester hours* (Offered odd spring semesters).

### **ESS-465. Health and Physical Education Teaching Seminar/Engstrom**

Readings, discussions, and individual research focused on pedagogy, measurement and evaluation, or some other facet of teaching health or physical education. At the conclusion of the seminar, students will present a research paper at an open meeting of the department. Prerequisite: This course can only be taken in conjunction with Education 405 and requires permission of the department. One hour per week. *One semester hour.* (Offered every fall semester).

NOTE: ESS 465 would be an elective course taken concurrently with Education 405. Students in the teaching track not selecting ESS 465 could complete the capstone requirement by scheduling.

### **ESS-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with a

## EXERCISE AND SPORTS SCIENCE/GEOGRAPHY/GEOLOGY/HISTORY

special interest in the field of exercise and sport science. Prerequisite; the permission of the departmental chair and project advisor. *Four semester hours.* (Offered every fall semester).

### ESS-492W. Research/Independent Work/Staff

A continuation of ESS 491. Prerequisite: ESS 491. *Four semester hours* (Offered every spring semester).

## GEOGRAPHY

### GEOG-102. Geography/Staff

Study of the major regions of the world. The purpose is to analyze each from the standpoint of climate, natural resources, and eco-

nomics problems, and to give the student a fairly detailed knowledge of the physical geography of the regions. Three hours per week. *Three semester hours.*

## GEOLOGY

The science of geology presents to the student the physical nature and history of the earth and their relationship to the cultural, economic and political concerns of man.

### GEOL-105Q (ENV/GEOL).

#### Environmental Geology/Pettingill/Sidie

An introduction to environmental geosciences. Includes a study of earth's environmental systems: lithosphere, hydrosphere, atmosphere, plate tectonics, rock types, mineral resources, volcanism, earthquakes, weathering soils, surface water, ground water, climate, weather, oceans, energy, environmental change. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

### GEOL-101.

#### Life on Earth/Staff

The history of life on earth is traced through geologic time. Students explore such areas as dating the past, relationship of earth's history to life development and evolution of plants and animals using fossils, study of the physiographic provinces of North America. Three class hours per week. *Three semester hours.*

## HISTORY

*Professors* Akin, Clark, Doughty, Hemphill (*Chair*), Strassburger; *Associate Professor* King.

To study history is to study the powerful interaction between the past and the present. The goals of the history department are threefold: first, to convey an understanding of the meaning of history and knowledge of its methodology; second, to nurture students' abilities to read critically, write clearly, reason logically and inferentially; and third, to offer the multicultural historical perspective that is necessary to understand the human condition and contemporary world affairs.

In addition to acquiring sound communication skills, history majors learn how to work with a vast variety of evidence, and how to evaluate the results. Moreover, the study of history is wide-ranging, as it connects all aspects of the present with the past. For these reasons, not only are there many career opportunities for history majors, but a minor in history can be combined with almost any other field. History is good training for careers in law, business, government, the foreign service, journalism, and publish-

ing. Moreover, those who wish to continue in history will find opportunities in teaching, historical preservation, and both management and interpretation in historical museums, sites, archives, and libraries. Historians also write and edit publications and manage archives for the government, publishers, and many businesses. These and other career options aside, the fundamental fact, recognized by the history department and employers alike, is that a consciousness of history and its critical skills is not a luxury, but a vital part of a liberal education.

### Requirements for Majors

History majors must take a minimum of nine courses in history. The following requirements must be fulfilled: History 200W; two courses in United States history (221, 320, 321, 323, 325, 327, 328, 329); two courses in European history (205, 206, 207, 304, 305, 306, 308); two courses in non-Western history (231, 241, 243, 253, 343, 344); one course in comparative history (361, 365, 366, and 368); and one 400-level capstone course.

All history majors are strongly encouraged by the department to participate in an approved study abroad program or to take History 381 (History Internship) or other internship course. History courses taken abroad may be counted to fulfill department requirements. Students interested in teaching history or social studies at the secondary school level should inform their faculty adviser and consult the education department booklet, Ursinus College Teacher Education Programs, for additional information.

### Requirements for Minors

Students seeking a minor in history must take a minimum of five courses in the department, at least one of which must be at the 300 or 400-level. Students interested in a history minor must register with the department chair to discuss their particular interests and goals and plan a course of study.

NOTE: History 101, 102, 200W, 207 and 221 are offered annually, while History 381 (History Internship) is offered every semester. Most other history courses are offered every other year.

#### HIST-101. The History of Traditional Civilizations/Staff

An introductory survey of the origins, development and achievements of the world's major civilizations, with emphasis on the comparative study of their respective ideas and institutions and on the early interaction among their societies. Significant selected primary sources will be assigned and short analytic papers required. Three hours per week. *Four semester hours.*

#### HIST-102. The Emerging World/Staff

An introductory survey of the development and transformation of the world's major civilizations in the modern era, with emphasis on the process of social, economic and political change; on the rise of "the West" to global dominance and its impact on other societies; and on the mutual interdependence of contemporary civilizations. Significant selected primary sources will be assigned and short analytic papers required. Three hours per week. *Four semester hours.*

## HISTORY

### **HIST-200W. Historiography/Staff**

An introduction to the major issues and practices in the study of history. The course will include material on the "history of history" and on the methods of historical research. Students will be required to do extensive writing and revision of papers. Three hours per week. *Four semester hours.*

### **HIST-205. Russia and The USSR/ Dr. King**

An examination of major political, social, economic, and cultural themes in the history of Tsarist Russia and the Soviet Union. Four hours per week of lectures and discussion. *Four semester hours.*

### **HIST-206. Europe in Revolution/ Dr. Doughty**

A study of the origins, nature and consequences of the English, French and Industrial Revolutions and their impact on Europe and the Americas. Topics include the English Civil War, Louis XIV; Napoleon; the social effects of industrialization and the development of parliamentary democracy in Britain. Significant time will be devoted to historiography. Four hours per week of discussion of assigned reading. *Four semester hours.*

### **HIST-207. The Global Century/ Dr. Doughty**

A survey of international relations and their domestic political, social and economic background in the 20th century, with particular emphasis on the origins and consequences of the two World Wars, the Cold War and the emergence of a global international system. Four hours per week of lecture and discussion. *Four semester hours.*

### **HIST-221. Introduction to American History/Dr. Akin/ Dr. Hemphill**

A survey of American history from the beginning of European settlement to the present, with an emphasis on the main themes of political and social development (the latter to include an analysis of the variables of race, class, region, ethnicity and gender). Four hours per week of lectures and discussion. *Four semester hours.*

### **HIST-231. History of Africa and the Atlantic World/Staff**

A survey of the history of Africa, including the migration of African descended people

to the New World. The course will cover a time span from the origins of humankind in East Africa to the present. Four hours per week. *Four semester hours.*

### **HIST-241. An Introduction to the History and Culture of China/Dr. Clark**

An introduction to Chinese history, with particular emphasis on late traditional (post-1600) cultural and social orders and their adaptation to the modern world up to and including the Chinese Revolution. Four hours per week. *Four semester hours.*

### **HIST-243. An Introduction to the History and Culture of Japan/Dr. Clark**

An introduction to Japanese history, with particular emphasis on late traditional (post-1600) cultural and social orders, and their adaptation to the modern world through World War II and the postwar settlement. Four hours per week. *Four semester hours.*

### **HIST-253. The Middle East/Dr. King**

An introduction to Middle Eastern societies and civilizations from the founding of Islam to the problems of the contemporary Middle East. Four hours per week of lectures and discussion. *Four semester hours.*

### **HIST-299. History Tutorial/Staff**

Individual study and directed reading on a selected topic in the historical literature and preparation of a critical bibliography of the works read. Open only to students majoring in history. Prerequisites: History 200 and prior consent of a member of the history department who agrees to serve as tutor. One hour per week. *One semester hour.* Offered as requested.

### **HIST-300. Special Topics in History/Staff**

An elective course dealing with special subject areas and periods. Three hours per week. (Not offered on a regular basis.) *Four semester hours.*

### **HIST-304. European Religious Wars, 1054-1648/ Dr. King**

This course examines religious conflict in Europe and its impact on political, social, economic, and cultural developments from the Schism of 1054 through the Thirty Years' War. Among the conflicts that will be studied in depth are the Crusades, medieval heresies and social reform movements, and the Protestant and Catholic Reformations.



Significant time will be devoted to the historiography of the period. Three hours per week. *Four semester hours.*

**HIST-305. The Devil in Europe: Witchcraft and Society, c. 1450-1750/ Dr. Doughty**

A study of the origins and dynamics of the witch-hunt in Europe, as a vehicle for examining early modern society and culture.

Topics to be studied will include the origins of village and learned witchcraft beliefs; the effects of religious and economic change; the role of gender in accusations and trials; Devil-worship and the witches' sabbat; and the reasons for the decline of the persecutions. Significant time will be devoted to the historiography of the topic. Three hours per week. *Four semester hours.*

**HIST-306. Ideas and Ideologies/ Dr. King**

An exploration of selected movements in the history of modern European political and social thought. Specific content may vary but will include such topics as liberalism, nationalism, racism, and socialism. Extensive readings in original sources, written analyses, and discussion. Three hours per week. *Four semester hours.*

**HIST-308. Nazi Germany and the Holocaust/Dr. Doughty**

A study of the rise of Adolf Hitler, the development of the National Socialist Party and the "Hitler State," German society under the Nazis, and the origins and implementation of the racial and foreign policies of the Third Reich. Significant time will be devoted to the historiography of the subject. Three hours per week of discussion of assigned readings. *Four semester hours.*

**HIST-320. American Legal and Constitutional History/Staff**

An examination of the evolution of American law and constitutional principles from the colonial period to the present. The course will focus on study of primary source readings and interpretation. Three hours per week. *Four semester hours.*

**HIST-321. Colonial and Revolutionary America/Dr. Hemphill**

A survey of the history of the British colonies in America, from their founding through the War for American Independence. Special attention will be given to the genesis of American culture and

institutions from diverse societies. Significant time will be devoted to the historiography of the period. Three hours per week. *Four semester hours.*

**HIST-323. The Young American Nation and the Civil War/Dr. Hemphill**

A survey of the history of the new American nation from its initial foundation in the Constitution period through its testing in the Civil War. Special emphasis will be given to the development of uniquely American politics and culture. Significant time will be devoted to the historiography of the period. Three hours per week. *Four semester hours.*

**HIST-325. The Emergence of Industrial America/ Dr. Akin**

The course examines the United States from the end of the Civil War to the end of World War I. The course will focus on the interrelationships between economic changes and changes in social structures (including sex, age, class, and race), popular culture and thought, and politics. Prerequisite: History 221 or Politics 218, or Sociology 245. Three hours per week. *Four semester hours.*

**HIST-327. 20th-Century America/ Dr. Akin**

The course examines the United States from 1919 to the present. The course will focus on the interrelationships between changes in the economic structure, social structure, politics and popular culture and thought. Prerequisites: History 221, or Politics 218, or Sociology 245. Three hours per week. *Four semester hours.*

**HIST-328. Women in American History/Dr. Hemphill**

An examination of the changing experience of American women from colonial times to the present. The focus of this course will be the interaction of that experience with ideal roles for women in the realms of family, religion, politics, economics, and social life. Attention will also be paid to the interaction of gender with the variables of class, race, ethnicity, and region. Three hours per week. *Four semester hours.*

**HIST-329 African-American History/Staff**

This course examines the historical context of African-descended people in the United States from colonial times to the present.

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The course will focus on the historical evolution of the African-American community, class, gender, and ideological diversity within the African-American community, and relationship of African-Americans to the larger American community. Three hours per week. *Four semester hours.*

**HIST-343. The History of Chinese Thought and Religion/  
Dr. Clark**

A survey of Chinese thought and religion from the foundations of Confucianism and Taoism through the Buddhist and Neo-Confucian reformations. The course will focus on primary source readings and interpretation. Three hours per week. *Four semester hours.*

**HIST-344. Society and Revolution Southeast Asia/Dr. Clark**

An examination of the origins of conflict in Southeast Asia from the 19th century to the present. Will approach the issue from the perspective of the societies themselves in an attempt to understand the domestic stresses, resulting from both internal and external change, which produced the post-World War II upheavals, as well as the motivations of the Western powers that intervened. Three hours per week. *Four semester hours.*

**HIST-361. East and West in the 13th Century/Dr. Clark**

A comparison/contrast of China and Western Europe on the eve of such events as the Mongol invasions, the Black Death, and the like. The course will focus particularly on economic, social and institutional structures. Three hours per week. *Four semester hours.*

**HIST-365. Empires and Nations/  
Dr. King**

A comparative history of the emergence of nationalism among the subject peoples of multinational empires in the nineteenth and twentieth centuries: Western Europe's overseas empires, the Russian/Soviet empire, the Austrian Empire, and the Ottoman Empire. The course will focus on theories of imperialism and of nationalism, and on the perspective of the societies struggling for national independence. Three hours per week. *Four semester hours.*

**HIST-366. History of the Family/  
Dr. Hemphill**

A survey of the changing structure and function of the family in Europe and America from 1500 to the present. Special attention will be paid to the relationship between changes in the family and changes in the wider society; the family as the locus for changing gender and age relations; and the variations in family forms dictated by class, race, ethnicity, religion, and region. Three hours per week of lectures and discussion. *Four semester hours.*

**HIST-368. Warfare and Society/  
Dr. Doughy**

A comparative study of warfare, in its social and cultural context, from c. 1500 BCE to the present. The interrelationships between warfare, technology, government and society will be emphasized. Europe, North America and Japan are areas which will be studied in detail. Three hours per week. *Four semester hours.*

**HIST-381. History Internship/Staff**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the chairman of the department for further details. Prerequisites: Junior standing, 12 credits in history (excluding 101, 102) and approval of a faculty internship adviser. *Four semester hours.*

**HIST-400W. Research/Staff**

Independent research, under the guidance of an adviser, directed toward the production and oral presentation of a historical project or paper. Open only to fourth-year students with the permission of the chair of the department of history. Prerequisite: History 200W or equivalent. (Offered as needed) *Four semester hours.*

**HIST-401W. Seminar in European History/Staff**

Readings and individual research on topics of European history, leading to preparation, oral presentation and discussion of research papers. Open to third- and fourth-year students. Prerequisite: History 200W or equivalent. Three hours per week. *Four semester hours.*

**HIST-421W. Seminar in American History/Staff**

Readings and individual research on topics of American history, leading to preparation,

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oral presentation and discussion of research papers. Open to third- and fourth-year students. Prerequisite: History 200W or equivalent. Three hours per week. *Four semester hours.*

### **HIST-442W. Seminar in East Asian, Middle Eastern, or African History/Staff**

Readings and individual research on topics of non-Western history, leading to preparation, oral presentation and discussion of research papers. Open to third- and fourth-year students. Prerequisite: History 200W or equivalent. Three hours per week. *Four semester hours.*

### **HIST-462W. Seminar in Comparative History/Staff**

Readings and individual research on topics in comparative history leading to preparation, oral presentation and discussion of

research papers. Open to third- and fourth-year students. Prerequisite: History 200W or equivalent. Three hours per week. *Four semester hours.*

### **HIST-491W. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the department chair.

Prerequisites: History 200W and the permission of the department. *Four semester hours.*

NOTE: HIST 491 does not fulfill the capstone requirement.

### **HIST-492W. Research/Independent Work/Staff**

A continuation of course 491. Open only to candidates for honors. Prerequisites: HIST 491 and permission of the department. *Four semester hours.*

## INTERDIVISIONAL STUDIES

### **IDS-101. World Literature I: The Literary Tradition/Staff**

Critical reading of selected representative works from Western and non-Western literatures from early civilization through the European Renaissance. The epic and drama will be emphasized. Three hours per week. *Four semester hours.* (See also URSINUS IN SEVILLA program)

### **IDS-102. World Literature II: Topics in Comparative Literature/Staff**

Critical reading of selected works, with emphasis on 19th- and 20th-century non-Western literatures, in a comparative and pluralistic context. Three hours per week. *Four semester hours.*

### **IDS-110. Topics in Interdivisional Studies/Staff**

This course will focus on a topic that is interdisciplinary in nature and is not covered in a similar fashion in other courses in the curriculum. Topics will vary, and students may repeat course when topics differ. Four hours per week. *Four semester hours.*

### **IDS-151Q. Interdisciplinary Science: Life's A Risk/Staff**

A study of risk analysis for living in a hazardous world. Of interest to anyone who hopes to eat, breathe, travel or reproduce,

and live to tell the tale. Readings from the scientific and popular literature; laboratories on risk assessment. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

### **IDS-201, 202, 203. Independent Study**

Guided independent study involving more than one academic discipline for second-term freshmen, sophomores, juniors, and seniors. Projects will result in a major paper or creative project. Project proposal requires a faculty sponsor and approval of the Interdisciplinary Independent Study Committee. *Four semester hours.*

### **IDS-301. Directed Readings**

This course can be taken either as an individualized tutorial or as a group readings course. Students and faculty collaborate in designing a reading list of interdisciplinary materials and writing projects appropriate to the number of semester hours for which the course is being taken (eight to ten pages of formal and informal writing per credit hour). Permission of instructor required. Two to *Four semester hours.*

### **IDS-332. Latin American Studies (see also Spanish)/Dr. Cameron**

An interdivisional approach to the study of Latin America. The development of the history, politics, society and literature of Latin

## INTERDIVISIONAL STUDIES/LIBERAL STUDIES

American nations will be examined. Readings will be selected from the works of major intellectual figures and writers. Emphasis will be on the 20th century. Weekly lectures, films, and class discussions. The language of instruction is English. Open to upper class students. Four hours per week. *Four semester hours.*

### **IDS-350. Human Sexuality/ Dr. England**

A study of the development and expression of human sexuality through the ages and through the lifespan of the individual. Alternate orientations, variances and sexual dysfunctions, disorders and diseases are also considered. Prerequisites: Biology 100 or

111, and Psychology 100 or permission of the instructor. Three hours per week. *Four semester hours.*

### **IDS-491. Research/Independent Work/Staff**

Individual investigation of an interdisciplinary topic. Open to candidates for interdepartmental honors and to other students. Permission of two department chairs required. *Four semester hours.*

### **IDS-492W. Research/Independent Work/Staff**

Continuation of IDS-492. *Four semester hours.*

## LIBERAL STUDIES

The goals of the Liberal Studies Seminar are 1) to develop a student's ability to think critically through a pedagogy which stresses the intellectual process; 2) to foster the essential skills of critical reading, effective speaking and clear writing; 3) to develop these skills within the intellectually challenging context of a broad theme relevant to the human condition; 4) to enable the student to make connections across the traditional disciplines.

All first-year students are required to enroll in a Liberal Studies Seminar during the fall or spring semester of their first year; transfer students may be exempted with the approval of the dean of the college.

All Liberal Studies Seminars share common features. The enrollment is limited to 15 students to provide an atmosphere conducive to discovery and inquiry. Faculty members from a variety of disciplines lead students to reflect about significant issues that introduce them to the intellectual climate of the College. Reading assignments consist of five or six books or equivalents. Frequent writing and oral assignments are required throughout the course.

During the 1999-20001 academic year, all of our first-year students participated in a challenging, broad-based, team-taught pilot program called The Common Intellectual Experience (CIE). This course, a variation of the traditional Liberal Studies Seminar, illustrates the link between the disciplines and presents the basis of a liberal arts education.

The CIE program is based around the questions: What is the universe and how do we fit into it? What does it mean to be human? and How should we live our lives? These questions get to the heart of a liberal arts education because they engage students and faculty in conversations about the fundamentals of human experience. Every first-year student will study the

## LIBERAL STUDIES/MATHEMATICS AND COMPUTER SCIENCES

same set of readings so that each will be able to discuss and debate these important ideas beyond the walls of classroom.

Texts this past year included Plato's "Euthyphro," "Apology" and "Crito;" Shakespeare's "The Tempest;" Descartes' "Discourse on Method;" as well as the study of Gilgamesh, Gallileo and Copernicus. The continuation of the course, IDS 110, invites students to explore issues of freedom and justice through readings that include the Declaration of Independence, Locke's "Second Treatise," English Romantic poetry, and the writings of Frederick Douglass, Karl Marx, Charles Darwin, Gandhi, Sigmund Freud, Halina Berenbaum, and Betty Friedan.

During the 1999-2001 academic years, IDS 110 may serve as a substitute for History 102, IDS 102, Philosophy 102 or Politics 100.

### IS-100. Liberal Studies Seminar/Staff

This seminar, required of all first-year students, is designed to develop the students' ability to think critically and to write and speak effectively. In each seminar, organized around a common theme, students will

explore an issue with interdisciplinary implications. Through the analysis of readings or other material such as films or performances, intensive writing and group discussions, students will participate in the challenges of intellectual inquiry. Four hours per week. *Four semester hours.*

## MATHEMATICS AND COMPUTER SCIENCE

*Professors* Coleman, Hagelgans, Jessup (Chair), Shuck; *Associate Professor* Neslen; *Assistant Professors* Buerle (visiting); Thiel; *Lecturer* Wait.

The general aims of the department of mathematics and computer science are (1) to give the students a grasp of the ideas and methods of mathematics and computer science; (2) to develop an understanding and appreciation of mathematics as an abstract deductive system; (3) to give the students an appreciation of the historical importance of mathematics in the progress of civilization, both past and present; and (4) to provide the students with sufficient skills to enable them to apply their knowledge to related fields of study.

For students majoring in mathematics or computer science, the department aims to provide stimulation and preparation for (1) continued study at the graduate level; or (2) effective teaching in the secondary schools; or (3) employment in industrial research, statistics, computing, or actuarial positions. For other majors, it seeks to provide the mathematical competence required by the increasing quantitative emphasis in many of these disciplines.

NOTE: Students who major in mathematics or computer science are encouraged to elect either a minor in another discipline or additional courses in mathematics and computer science. The latter is especially rec-

## MATHEMATICS AND COMPUTER SCIENCES

commended for students planning to do graduate work in mathematics or a related discipline.

### COMPUTER SCIENCE

#### Requirements for Computer Science Majors

A student majoring in computer science is required to take Math 108 or 111, 112, 236W, and CS 271 and 272; two of the mathematics courses Math 211, 235, 341, 434, 462; and at least four of the computer science courses CS 371, 372, 373, 374, 471, 472, 473, 474, including either CS 471 or 472, and at least two of CS 371, 372, 373 or 374.

#### Recommendations for Computer Science Majors

Recommended ancillary courses are Physics 111, 112, 209 and Economics 100. Additional recommended mathematics courses are Math 214, 241, and 342.

#### Requirements for Computer Science Minors

A minor concentration in computer science consists of Math 108 or 111, 112, 236W; CS 271, 272; and two courses from CS 371, 372, 373, 374.

#### CS-270. Computational Statistics (SAS)/Staff

Statistical analysis using statistical software. Design, collection, organization, and storage of data sets. Statistical programming, debugging, analysis of output and interpretation of results. Prerequisites: at least one semester of programming experience, and Math 242 or Math 243. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

#### CS-271. Computer Science I/Staff

Problem-solving methods and algorithm development. Computer programming with a high-level language. Design, coding, debugging, and internal and external documentation of programs. Emphasis on developing good programming style. Programming projects of increasing complexity.

Recommended for students in mathematics and the natural sciences. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

#### CS-272. Computer Science II/Staff

A continuation of CS 271. Introduction to algorithm analysis and data structures. Larger programs. Team projects and/or incremental projects. Prerequisite: CS 271. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

#### CS-371. Data Structures and Algorithms/Dr. Jessup

Review of lists, complexity of algorithms, searching and sorting algorithms, tables, hashing, recursion, tree and graph algorithms. Offered in the fall of odd years. Prerequisites: Math 111 and CS 272. Three hours per week. *Four semester hours.*

#### CS-372. Computer Organization/Dr. Jessup

Hierarchical structure of computer architecture, number systems, arithmetic operations, codes, switching algebra, logic gates, assembly language programming. Prerequisite: CS 271. Offered in the spring of even years. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

#### CS-373W. Theory of Computation/Staff

Principles of formal languages, automata, computability and computational complexity. Emphasis on writing proofs of theorems. Prerequisites: English 100, Math 236W and CS 272. Offered in the fall of even years. Three hours per week. *Four semester hours.*

#### CS-374. Principles of Programming Languages/Dr. Hagelgans

Syntax, processors, representations and styles of programming languages. Study and

## MATHEMATICS AND COMPUTER SCIENCES

comparison of several modern programming languages. Offered in the spring of odd years. Prerequisite: CS 272. Three hours per week. *Four semester hours.*

### CS-381. Internship/Dr. Hagelgans/ Dr. Jessup

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the chair of the department for further details. Prerequisites: Junior standing, three courses in computer science and approval of a faculty internship adviser. Eight to 10 hours per week. Graded S/U. *Three semester hours.*

### CS-383. Internship/Dr. Hagelgans/ Dr. Jessup

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the chair of the department for further details. Prerequisites: Junior standing, three courses in computer science, and approval of a faculty internship adviser. Eleven to 14 hours per week. Graded S/U. *Four semester hours.*

NOTE: Students may receive credit for two internships that meet the conditions described in this catalog.

### CS-391. Research/Independent Work/Staff

Independent investigation of an area of computer science not covered in regular courses. Prerequisite: Written consent of a department faculty member. Offered in the fall semester. Graded S/U. *One semester hour.*

NOTE: This course may be taken more than once.

### CS-392. Research/Independent Work/Staff

Independent investigation of an area of computer science not covered in regular courses. Prerequisite: Written consent of a department faculty member. Offered in the fall semester. Graded S/U. *Two semester hours.*

NOTE: This course may be taken more than once.

### CS-393. Research/Independent Work/Staff

Independent investigation of an area of computer science not covered in regular courses. Prerequisite: Written consent of a department faculty member. Offered in the

spring semester. Graded S/U. *One semester hour.*

NOTE: This course may be taken more than once.

### CS-394. Research/Independent Work/Staff

Independent investigation of an area of computer science not covered in regular courses. Prerequisite: Written consent of a department faculty member. Offered in the spring semester. Graded S/U. *Two semester hours.*

NOTE: This course may be taken more than once.

### CS-471. Seminar in Computer Science I/Dr. Hagelgans

A detailed study of an advanced topic in computer science such as software design, object-oriented programming, operating systems, parallelism, artificial intelligence, neural networks, or database design. This course will satisfy the College requirement for a capstone experience and an oral presentation in the major. Prerequisites: CS 272 and written permission of the instructor. Usually offered in the fall semester of odd years. Three hours per week. *Four semester hours.*

### CS-472. Seminar in Computer Science II/Dr. Jessup

The course will cover topics similar to those listed in CS 471. This course will satisfy the College requirement for a capstone experience and an oral presentation in the major. Prerequisites: CS 272 and written permission of the instructor. Usually offered in the spring semester of odd years. Three hours per week. *Four semester hours.*

### CS-473. Topics in Advanced Computer Science I/ Dr. Jessup

A course designed to acquaint the student with current trends in advanced topics in computer science and its applications. The course will be adapted to the students' interests and needs. Prerequisite: Permission of the instructor. Offered in the fall semester of even years. Three hours per week. *Four semester hours.*

### CS-474. Topics in Advanced Computer Science II/ Dr. Hagelgans

A course designed to acquaint the student with current trends in advanced topics in

## MATHEMATICS AND COMPUTER SCIENCES

computer science and its applications. The course will be adapted to the students' interests and needs. Prerequisite: Permission of the instructor. Offered in the spring semester of even years. Three hours per week. *Four semester hours.*

### CS-491. **Research/Independent Work/Staff**

Independent investigation of an area of computer science not covered in regular

courses. An oral presentation to the department is required. Prerequisites: Written consent of a member of the staff to serve as an adviser. *Four semester hours.*

### CS-492. **Research/Independent Work/Staff**

Content and prerequisites as in CS 491. *Four semester hours.*

## MATHEMATICS

### Requirements for Mathematics Majors

A student majoring in mathematics is required to take Math 108 or 111, 112, 211, 235, 236W, and CS 271, and at least four courses in mathematics or computer science at the 300- or 400-level (excluding CS 372), including two of the following sequences:

1. Math 311 plus one of 312, 421, 462
2. Math 335 and 434
3. Math 341 and 342\*

### Recommendations for Mathematics Majors

Economics 100 and Physics 111, 112, are recommended. Students planning to do postgraduate work in mathematics should take Math 311, 312, 335 and 421. Students planning to seek jobs in industry should take Math 214, 341, 342, and 462. Students preparing for work in the computing field should take CS 272, 371, 372, and at least one of 373, 374, 471, 472.

### Secondary Certification

Students preparing for secondary teaching must major in mathematics, and take Math 322, 335, 341, 382, 434, and either 241 or 342 to satisfy the mathematics part of certification requirements.\* As many of the following as possible are recommended: Math 214, 311, 421. Details may be obtained from the department of mathematics and computer science or education. Those students preparing for secondary teaching should consult the education department booklet, Ursinus College Teacher Education Programs.

\*Students preparing for secondary certification may substitute Math 241 for Math 342 in the major requirements.

### Requirements for Mathematics Minors

A minor concentration in mathematics consists of Math 108 or 111, 112, 211, 235; and two additional courses in mathematics chosen from 214, 236W, 311W, 312, 322, 335, 341, 342, 421, 434, 451, 452, 462, at least one of these courses being at the 300 or 400 level.



## MATHEMATICS AND COMPUTER SCIENCES

A minor concentration in statistics consists of Math 108 or 111, 112, 211, 242 or 243, 341, 342.

A minor concentration in biostatistics consists of Bio 111, Bio 112, Math 241, Math 243, and one of CS 270, Math 384 or Math 441.

NOTE: Students who have taken Math 242 (Statistics II) may substitute a second course from CS 270, Math 384 or Math 441 for Math 243.

### **MATH-100. Mathematics for the Liberal Arts/Ms. Wait**

A cultural and historical approach to mathematics. Appreciation of the beauty and creative aspects of mathematics and its role in nature and the arts. Essay tests and papers as well as problems using deductive reasoning. Three hours per week. *Four semester hours.*

### **MATH-105. Calculus for Economics and Business/Dr. Neslen**

Conceptual understanding of differential and integral calculus. Some classical applications as well as applications to economics and business. Offered both semesters. Four hours per week. *Four semester hours.*

NOTE: A student may not receive credit for both Math 105 and Math 108. A student who has received credit for Math 105 may not enroll in Math 107. A student who has received credit for Math 111 may not enroll in Math 105.

### **MATH-107. Calculus with Review I/ Ms. Wait**

Calculus integrated with an extensive review of precalculus. The Cartesian plane, algebraic and trigonometric functions, limits, continuity, derivatives, application of derivatives. Use of a computer algebra system. Continued in Math 108. The sequence Math 107-108 is equivalent to Math 111 with precalculus review. Prerequisite: Placement based on the high-school record and a diagnostic review. Offered in the fall semester. Four hours per week. *Four semester hours.*

NOTE: A student who has received credit for Math 105, Math 110, or Math 111 may not enroll in Math 107.

### **MATH-108. Calculus with Review II/Ms. Wait**

A continuation of Math 107. Calculus integrated with an extensive review of precalculus. Logarithmic and exponential functions and their applications, integrals, the funda-

mental theorem of calculus. Use of a computer algebra system. The sequence Math 107-108 is equivalent to Math 111 with precalculus review. Prerequisite: Placement based on the high-school record and a diagnostic review, or a grade of C- or better in Math 107. Offered in the spring semester. Four hours per week. *Four semester hours.*

NOTE: A student may not receive credit for both Math 108 and any of the following courses: Math 105, Math 110, and Math 111.

### **MATH-111. Calculus I/Staff**

Limits; derivatives; applications of derivatives; integrals; trigonometric, logarithmic, and exponential functions and their applications. Use of a computer algebra system. Prerequisite: Placement based on the high-school record and a diagnostic review. Offered both semesters. Four hours per week. *Four semester hours.*

NOTE: A student may not receive credit for both Math 108 and Math 111. A student who has received credit for Math 111 may not enroll in Math 105 or Math 107.

### **MATH-112. Calculus II/Staff**

A continuation of Math 111. Inverse trigonometric functions, techniques of integration, applications of integration, improper integrals, indeterminate forms, polar coordinates, parametric equations, infinite sequences and series. Use of a computer algebra system. Prerequisite: A grade of C- or better in Math 108 or Math 111, or permission of the department. Offered both semesters. Four hours per week. *Four semester hours.*

### **MATH-211. Multivariate Calculus/ Dr. Shuck**

Functions of several variables, including three-dimensional geometry and vectors, partial differentiation, multiple integration, selected topics from differential equations, line and surface integrals, and the theorems of Green, Gauss, and Stokes. Use of a com-

## MATHEMATICS AND COMPUTER SCIENCES

puter algebra system. Prerequisite: A grade of C- or better in Math 112 or permission of the department. Four hours per week. *Four semester hours.*

### **MATH-214. Differential Equations and Mathematical Models/Dr. Thiel**

Mathematical methods for developing models in the physical, biological, and social sciences. Emphasis on models involving differential equations. Solutions of ordinary differential equations of first and second order. Additional topics chosen from power series solutions, systems of linear equations, numerical methods, and Laplace transforms. Independent projects. Use of a computer algebra system. Prerequisite: Math 112. Three hours per week. *Four semester hours.*

**MATH-235. Linear Algebra/Dr. Thiel**  
Systems of linear equations, matrix theory, real vector spaces, linear transformations, eigenvectors and eigenvalues, inner products, orthogonal transformations, quadratic forms, applications. The computer as a computational tool. Prerequisite: Math 111 or permission of the instructor. Four hours per week. *Four semester hours.*

### **MATH-236W. Discrete Mathematics/Dr. Hagelgans**

A course designed to bridge the gap between computation-oriented introductory courses and proof-oriented advanced courses. The language of contemporary mathematics, including the proper way to write mathematics, and the nature of mathematical reasoning. Extensive writing projects. Topics studied may include axiomatic systems, logic, set theory, functions, mathematical induction, graph theory and trees. Prerequisites: Math 111 and English 100. Three hours per week. *Four semester hours.*

### **MATH-241Q. Statistics I/Staff**

Statistical methods of studying data, measures of central tendency and dispersion, probability, and distributions including: binomial, normal, and Student's  $t$ ; confidence intervals and hypothesis testing. Computer statistical packages. Offered both semesters. Four hours per week. *Four semester hours.*

NOTE: Students with credit for Math 342 may not enroll in Math 241.

**MATH-242. Statistics II/Dr. Coleman**  
A continued study of basic statistical techniques including basic concepts of experi-

mental design, techniques of analysis of variance, methods of regression analysis, linear models, chi-square tests and non-parametric statistics. Prerequisite: Math 241 or 342. Three hours per week. *Four semester hours.*

**MATH-243. Biostatistics/Dr. Coleman**  
Statistical techniques appropriate to the biological sciences. Topics such as experimental design, hypothesis testing, nonparametric methods, chi-square tests, simple and multiple regression, analysis of variance. Prerequisite: Math 241 or 342. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

NOTE: Students may not receive credit towards graduation for both Math 242 and Math 243.

**MATH-311W. Analysis I/Dr. Shuck**  
An introduction to the real number system and theoretical treatment of limits, continuity, and differentiability. Additional topics may include sequences and series, abstract metric spaces, and countability. Emphasis on writing mathematical proofs. Prerequisites: English 100, Math 211 and 236W. Three hours per week. *Four semester hours.*

**MATH-312. Analysis II/Dr. Shuck**  
A continuation of Math 311. The Riemann integral, infinite series, sequences and series of functions, introduction to metric spaces. Prerequisite: Math 311. Offered in the spring of odd years. Three hours per week. *Four semester hours.*

**MATH-322. Fundamentals of Geometry/Dr. Thiel**  
Axiomatic development, introduction to non-Euclidean geometry, projective geometry and modern geometry. Prerequisite: Math 236W. Offered in the spring of odd years. Three hours per week. *Four semester hours.*

**MATH-335. Abstract Algebra/Dr. Shuck**  
An introduction to algebraic structures, with emphasis in the first semester on groups. Subgroups, quotient groups, homomorphisms, isomorphism theorems, Cayley's theorem, permutation groups. Prerequisites: Math 235 and 236W. Offered in the spring semester. Three hours per week. *Four semester hours.*

**MATH-341. Probability/Dr. Coleman**  
An introduction to probability theory, discrete and continuous probability distribu-

## MATHEMATICS AND COMPUTER SCIENCES

tions, moments and moment-generating functions of random variables, transformations of random variables. Prerequisite: Math 211. Four hours per week. *Four semester hours.*

### **MATH-342. Mathematical Statistics/ Dr. Coleman**

The mathematical background of modern statistics, including the development of sampling distributions, the theory and application of estimation, tests of hypotheses, regression and correlation, and analysis of variance. This course will satisfy the College requirement for a capstone experience and an oral presentation in the major. Prerequisite: Math 341. Three hours per week. *Four semester hours.*

### **MATH-381. Internship/Dr. Hagelgans**

An off-campus academic/work experience under the supervision of an internship adviser and on-site supervisor. Contact the chair of the department for further details. Prerequisites: Junior standing, three courses in mathematics and approval of a faculty internship adviser. Eight to 10 hours per week. Graded S/U. *Three semester hours.*

### **MATH-382. History of Mathematics/ Dr. Neslen**

Mathematical thought from ancient times to the early 1800s. Topics from the modern era may be included. Prerequisite: Math 236W. Offered in the spring semester of even years. Three hours per week. *Four semester hours.*

### **MATH-383. Internship/Dr. Hagelgans**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the chair of the department for further details. Prerequisites: Junior standing, three courses in mathematics, and approval of a faculty internship adviser. Eleven to 14 hours per week. Graded S/U. *Four semester hours.*

NOTE: Students may receive credit for two internships that meet the conditions described in this catalog.

### **MATH-384. Internship in Biostatistics/ Staff**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the chair of the department for further details. Prerequisites: junior standing, Math

242 or Math 243, and approval of a faculty internship adviser. Eleven to 14 hours per week. Graded S/U. *Four semester hours.*

### **MATH-391. Research/Independent Work/Staff**

Independent investigation of an area of mathematics not covered in regular courses. Prerequisite: Written consent of a department faculty member. Offered in the fall semester. Graded S/U. *One semester hour.*

NOTE: This course may be taken more than once.

### **MATH-392. Research/Independent Work/Staff**

Independent investigation of an area of mathematics not covered in regular courses. Prerequisite: Written consent of a department faculty member. Offered in the fall semester. Graded S/U. *Two semester hours.*

NOTE: This course may be taken more than once.

### **MATH-393. Research/Independent Work/Staff**

Independent investigation of an area of mathematics not covered in regular courses. Prerequisite: Written consent of a department faculty member. Offered in the spring semester. Graded S/U. *One semester hour.*

NOTE: This course may be taken more than once.

### **MATH-394. Research/Independent Work/Staff**

Independent investigation of an area of mathematics not covered in regular courses. Prerequisite: Written consent of a department faculty member. Offered in the spring semester. Graded S/U. *Two semester hours.*

NOTE: This course may be taken more than once.

### **MATH-421. Topology/Dr. Hagelgans**

Elementary point set topology; metric spaces; topological spaces, separation axioms, compactness, connectedness. Prerequisite: Math 236W. Offered in the fall of odd years. Three hours per week. *Four semester hours.*

### **MATH-434. Theory of Numbers/ Dr. Shuck**

Divisibility; unique factorization; congruences; theorems of Fermat, Euler and Wilson; primitive roots; Diophantine equations; Fermat's conjecture; algebraic and transcen-

## MATHEMATICS AND COMPUTER SCIENCES/MODERN LANGUAGE

dental numbers; Liouville's theorem. Additional topics chosen from quadratic reciprocity; continued fractions; sums of squares; distribution of primes; quadratic fields; public-key cryptography. This course will satisfy the College requirement for a capstone experience and an oral presentation in the major. Prerequisite: Math 236W. Offered in the spring semester of even years. Three hours per week. *Four semester hours.*

### **MATH-441. Applied Research in Biostatistics/Staff**

Directed independent study on current problems in biostatistics. A mentoring program run in conjunction with local industry. The course will introduce students to fundamental research procedures and data analysis in the context of a research problem resulting in a research report. Students should expect to spend at least 12 hours per week working on their research project. Prerequisites: junior standing, Math 242 or Math 243, and written permission of a department faculty member required. *Four semester hours.*

### **MATH-451. Topics in Advanced Mathematics I/Staff**

A course designed to acquaint the student with modern trends in advanced topics in mathematics and its applications. The course will be adapted to the students' preferences and needs. Prerequisite: Permission of the instructor. Three hours per week. *Four semester hours.*

### **MATH-452. Topics in Advanced Mathematics II/Staff**

A course designed to acquaint the student with modern trends in advanced topics in mathematics and its applications. The course will be adapted to the student's preferences and needs. Prerequisite: Permission of the instructor. Three hours per week. *Four semester hours.*

### **MATH-462. Numerical Analysis/ Dr. Thiel**

Selected topics from numerical analysis are presented. These may include solving systems of linear equations, linear and nonlinear differential equations, numerical integration and differentiation, eigenvalue problems, error analysis, interpolation and approximation. The computer will be used. Prerequisites: Math 211 and an ability to program. Offered in the fall semester of even years. Three hours per week. *Four semester hours.*

### **MATH-491. Research/Independent Work/Staff**

Independent investigation of an area of mathematics not covered in regular courses. An oral presentation to the department is required. Prerequisite: Written consent of a member of the staff to serve as an adviser. *Four semester hours.*

### **MATH-492. Research/Independent Work/Staff**

Content and prerequisite as in Math 491. *Four semester hours.*

## MODERN LANGUAGES

*Professors* Clouser, Lucas, Novack, Thelen, Trout (Chair); *Associate Professor* Cameron; *Assistant Professors* de Arana Mizenko, Shuru; *Instructors* Biel, Nishio (visiting); *Lecturers* Hardin, Lüttcher, Sabella, Zabegailo.

The Modern Language Department aims, in its elementary and intermediate courses, to develop students' linguistic ability and understanding of a foreign culture and to introduce them to its literature. More advanced courses seek to perfect the use of the oral and written language, to study foreign societies and cultures, and to explore the foreign literature in order to develop faculties of analysis and aesthetic judgment.

Majors should enrich their studies with courses in other literatures and relevant languages, European history and thought, and the fine arts and music. Majors interested in international affairs, business or diplomacy should

choose appropriate courses from the departments of economics and business administration, history and politics. Students planning to pursue graduate study are especially advised to take courses in a second foreign language, world literature, and history, as appropriate. Similarly, students with international interests who are majors in other departments should formulate a minor in French, German, or Spanish to suit their goals. The varied activities of the language clubs add to the department's offerings.

### **Requirements for Majors (see individual languages)**

Secondary School Certification: Students planning to obtain certification for secondary-school teaching in French, German or Spanish must take a minimum of 24 credit hours in French, German or Spanish at the 200, 300 and 400 levels. The following courses are required: French 251; 252 or 254; 313 or 314; 328, and at least two 300- or 400-level courses; German 251 and 252; 313 or 314; 328 and at least two 300- or 400-level courses; Spanish 251, 252, 317, 328 and at least two 300- or 400-level courses. Students seeking certification in Japanese are required to take the following courses: Japanese 211, 212, 301, 328; English 224; History 243, or Politics 346; and East Asian Studies 299, or 314, or 401. In addition to the course requirements, students are required to pass a qualifying examination before they will be admitted to candidacy for certification and a competency examination before being certified.

These tests will examine students' linguistic competence, orally and in writing, testing phonetics, conversation, grammar and composition. The exit exam will also check their knowledge of French, German, Japanese, or Spanish literature and culture, including the arts, history and geography. Students and their advisers should consult the education department booklet: Ursinus College Teacher Education Programs. Language majors and students preparing for certification are required to supplement their work at Ursinus by spending a summer, a semester or an entire year in a foreign country with a program approved by the department. Exceptions to this policy may be made by petition to the department chair. Students who wish to satisfy the language requirement in a modern language will be placed in the appropriate language class based on background and the results of the Foreign Language Diagnostic Test.

### **Requirements for Minors**

A minor concentration in French consists of 251 and 16 additional credits of French at the 200, 300 or 400 level.

A minor concentration in German consists of German 251 and 16 additional credits of German at the 200, 300 or 400 level.

A minor concentration in Spanish consists of Spanish 208 or Spanish 251 or 252, and 16 additional credits of Spanish at the 200, 300 or 400 level, excluding Spanish 332.

## MODERN LANGUAGES/FRENCH

A minor concentration in Latin American studies consists of Spanish 252, 317, 332, and eight additional credits from the following courses: Spanish 200, 203 and 209, 351, 352, Politics 242, 344, 355.

### English for Speakers of Other Languages

The ESOL course is meant to be taken during the first year at Ursinus during which many foreign students may have adjustment problems.

#### ESOL-100. English for Speakers of Other Languages/ Ms. Sabella

A developmental course for non-native speakers. Introduction to the structure and style of American academic English. Review of grammar to perfect oral and written communication. Four hours per week plus one hour of tutoring per week. *Four semester hours.*

**ML-100. Modern Languages/Staff**  
Individualized study of languages, such as Italian, Hebrew and others. Prerequisite: Permission of the instructor. *Four semester hours.* (These courses do not satisfy the College language requirement for graduation.)

## FRENCH

French majors are required to take at least 36 credit hours in French language, literature, and civilization above the 100 level. French 251, 252 or 254 and at least one 400-level W course are required, as well as a study abroad experience as approved by the department.

**FREN-101. Elementary French I/Staff**  
Development of the four skills of listening, speaking, reading and writing. Designed for beginners or students with little or no recent study of the language. Four hours per week plus one hour of language lab. *Four semester hours.*

**FREN-102. Elementary French II/Staff**  
Continuation of French 101. Four hours per week plus one hour of language lab. *Four semester hours.*

**FREN-111. Intermediate French I/  
Dr. Novack**  
Conversation and vocabulary development; grammar review, written work and discussions are based on cultural, social and literary selections. Prerequisite: French 102 or equivalent. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

**FREN-112. Intermediate French II/  
Dr. Novack**  
Continued emphasis on comprehension and speaking. Reading in literary and cultural texts and longer writing assignments.

Prerequisite: French 111 or equivalent. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

**FREN-201. Conversation and Composition/Dr. Trout**  
Intensive review of grammar to perfect oral and written communication. Topics of discussion will focus on contemporary French society using newspaper articles, films and literary texts. Writing will be both formal and informal. Prerequisite: French 112 or equivalent. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

**FREN-202. Film and Literature/  
Dr. Trout**  
A study of French culture as reflected through its literature and film. A special emphasis will be put on the adaptation of literary works into films. Prerequisite: French 201 or permission of instructor. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

## MODERN LANGUAGES/FRENCH

### **FREN-203. Studies of Senegal/ Dr. Novack**

Study of contemporary Senegal, especially the indigenous and European influences which have contributed to modern Senegalese culture, as concrete preparation for future study abroad in Senegal. French 203 includes essential information on Senegalese geography, history, politics, customs, languages, society, literature, and the arts. Readings come from works of major Senegalese writers and authentic cultural documents. Class discussion in French, guest speakers, Senegalese films. Fall semester. Prerequisite: French 112 or permission of instructor. This course does not satisfy the language requirement unless it is taken with French 209. Two hours per week. *Two semester hours.*

### **FREN-209. Winter Study in Senegal/ Staff**

A two-week language course, including 30 hours of classroom study, homestay with a Senegalese family, afternoon excursions and weekend travel directed by Ursinus faculty. Offered during winter break. Students may register for French 209 as part of the regular load for either semester. Prerequisite: French 203 or permission of the instructor. This course may be used to fulfill the language requirement only if taken twice or in conjunction with French 203. *Two semester hours.* May be taken for credit twice.

### **FREN-251. Introduction to French Literature/Dr. Lucas/ Dr. Novack**

A selection of major French writers from the Middle Ages to the present. Special attention will be given to the socio-cultural context from which their narratives emerged. Students will also be introduced to literary analysis and to formal writing. Prerequisite: French 201 or permission of the instructor. Four hours per week. *Four semester hours.*

### **FREN-252. Le Monde francophone /Dr. Lucas/Dr. Novack/ Dr. Trout**

A study of major writers from Francophone countries from the 19th and 20th centuries. This team-taught course will examine how colonization and its aftermath have shaped the issues of language, identity, class and gender in French-speaking literature of Canada, Africa and the Caribbean.

Prerequisite: French 201 or permission of instructor. Four hours per week. *Four semester hours.* This course will be offered in the Spring term of odd-numbered years and will alternate with French 254.

**FREN-254. Contes et nouvelles/Staff**  
A study of various short texts, "contes," "nouvelles" and "récits" from French-speaking authors from the 18th century to the present. Emphasis will be placed on the development of the genre as influenced by historical, social and gender issues. Authors selected include Voltaire, Maupassant, Mérimé, Colette, Mandiargues, Roy, Camus, Beauvoir, Hébert, Birago Diop, Sembene and others. Prerequisite: French 201 or permission of the instructor. Four hours per week. *Four semester hours.*

This course will be offered in the Spring term of even-numbered years and will alternate with French 252. All 300-level courses are offered in rotation.

### **FREN-313. French Culture and Society/Dr. Lucas**

A study of France from the Old Regime to the Second World War. Students will examine social conditions, artistic achievements, and intellectual and philosophical developments. In addition to basic texts, films, slides and original documents will be utilized. Writing assignments and oral presentation are required. Prerequisite: Two courses at the 200 level or permission of the instructor. Four hours per week. *Four semester hours.*

### **FREN-314. France Today/Dr. Trout**

A study of the forces of change and tradition in contemporary French society through an examination of the political, social and cultural developments of the past 30 years. Prerequisite: Two courses at the 200 level or permission of the instructor. Four hours per week. *Four semester hours.*

### **FREN-318. Commercial and Economic French/Dr. Novack**

Study of the economy, business organization and commercial practices of France and French-speaking countries with special attention to France's role in the European Union. Prerequisite: French 201, 202 or permission of the instructor. Four hours per week. *Four semester hours.*

## MODERN LANGUAGES/FRENCH

### **FREN-328. Advanced Grammar and Translation/Dr. Novack**

French phonetics, morphology and syntax, with emphasis on problems related to the teaching of the language. Frequent translations focus on structural differences between French and English. Prerequisite: Two semesters at the 200-level. Four hours per week. *Four semester hours.*

### **FREN-335. Independent Study in French/Staff**

Individual study of topics in French literature and civilization. May also be used in preparation for research or internship abroad. Prerequisites: Two 200-level courses and permission of instructor. *Two to Four semester hours.*

### **FREN-340. 20th-Century Novel/Dr. Trout**

The development of the French novel of the 20th century from Proust to the writers of the new novel. Authors studied include Colette, Malraux, Sartre, Camus, Beauvoir, Duras and others. Prerequisites: French 251; 252 or 254, or permission of the instructor. Three hours per week. *Four semester hours.*

### **FREN-350. 19th-Century Novel/Dr. Novack**

The evolution of the French novel with emphasis on Stendhal, Balzac, Flaubert and Zola. Prerequisites: French 251; 252 or 254, or permission of the instructor. Three hours per week. *Four semester hours.*

### **FREN-360. 18th-Century Literature/Dr. Novack**

Human nature, liberty, reason and their limits as seen in Enlightenment writing before the Revolution of 1789. Readings from Voltaire, Diderot, Rousseau, Laclos and others. Prerequisites: French 251; 252 or 254, or permission of the instructor. Three hours per week.

### **FREN-370. 17th-Century Classicism/Dr. Novack**

Classical French literature with emphasis on the theater of Corneille, Molière and Racine. Prerequisites: French 251; 252 or 254, or

permission of the instructor. Three hours per week. *Four semester hours.*

### **FREN-381. Internship/Staff**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the chair of the department for further details. Prerequisites: Junior standing, three courses in French, and approval of a faculty internship adviser. Twelve to sixteen hours per week. *Four semester hours.*

### **FREN-440W, 441W. Seminar in Francophone Literature and Culture/Staff**

These courses are offered on a rotating basis and subjects will be determined according to students' background and interest. The seminars will take a thematic approach and topics may include the following: "In Search of French Identity," "Literature from French-speaking Africa," "The Poetic Quest: Baudelaire, Verlaine, Rimbaud," "La condition féminine: Pisan, Sand, Beauvoir," "Colonizers and Colonized," "Coming of Age in French-speaking Literature," "Rebels and Revolutionaries." These courses satisfy the College requirement of a capstone experience. Prerequisites: French 340, or 350, or 360, or 370 or permission of the instructor. CST 201 is highly recommended. Three hours per week. *Four semester hours.*

### **FREN-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the department chair. This course does not satisfy the College requirement of a capstone experience. *Four semester hours.*

### **FREN-492W. Research/Independent Work/Staff**

A continuation of course 491. This is a writing-intensive course and at least one formal oral presentation is required. This course satisfies the College requirement of a capstone experience. Prerequisites: English 100, French 491 and permission of the department chair. CST 201 is highly recommended. *Four semester hours.*



**GERMAN**

German majors are required to take a minimum of 36 credit hours in German beyond the 100 level. German 251, 252 and at least one 400-level W course are required, as well as a study abroad experience as approved by the department.

**GER-101. Elementary German I/Staff**  
Development of the four skills of listening, speaking, reading and writing. Designed for beginners or students with little or no recent study of the language. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

**GER-102. Elementary German II/Staff**  
Continuation of German 101. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

**GER-111. Intermediate German I/Dr. Clouser**  
A review of basic grammar concepts and development of listening and communication skills. Texts of social and cultural interest provide the focus for class discussion and writing exercises. Prerequisite: German 102 or equivalent. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

**GER-112. Intermediate German II/Dr. Clouser**  
A continuation of German 111. A review of selected advanced grammar concepts and further development of listening and communication skills. Prerequisite: German 111 or equivalent. Four hours plus one conversation hour per week with the language assistant. *Four semester hours.*

**GER-201. Conversation and Composition I/Staff**  
Intensive review of grammar to perfect oral and written communication. Literary texts, newspaper articles, and German films will be discussed. Course includes formal and informal writing exercises and student presentations. Prerequisite: German 112 or equivalent. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

**GER-202. Conversation and Composition II/Staff**  
Intensive review of grammar to perfect oral and written communication. Course includes formal and informal writing exer-

cises and student presentations. Prerequisite: German 201 or permission of instructor. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

**GER-251. Introduction to German Literature/Dr. Clouser**  
A survey of the works of major German writers from the Middle Ages to the 18th century. Special emphasis will be given to the socio-cultural context in which their writing is embedded. Students will also be introduced to literary analysis and formal writing. Prerequisite: German 202 or permission of instructor. Four hours per week. *Four semester hours.*

**GER-252. Contemporary German Literature/Dr. Clouser**  
The works of such 20th-century authors as Kafka, Hofmannsthal, Borchert and Christa Wolf will be discussed in the context of the times in which they were written. Students will analyze these works and familiarize themselves with the politics, art, and film of 20th-century Germany. Prerequisite: German 202 or permission of instructor. Four hours per week. *Four semester hours.*

**GER-253. Das deutsche Märchen/Dr. Clouser**  
A study of the German Fairy Tale from the Brothers Grimm through the 20th century. Oral antecedents, the literary fairy tale, and satirical fairy tales will be treated. Prerequisite: German 251. Three hours per week. *Four semester hours.*

300- and 400-level courses are offered in rotation.

**GER-313. German Studies in Literature/Staff**  
Topics vary. Prerequisite: Two of the following courses: German 201, 202, 251, 252 or permission of instructor. Three hours per week. *Four semester hours.*

**GER-314. German Studies in Literature and Culture/Staff**  
A study of German cultural, intellectual, and artistic life from the Middle Ages to the pre-

## MODERN LANGUAGES/GERMAN

sent. Original texts, slides and films supplement the readings. Prerequisites: German 201, 202 or permission of instructor. Four hours per week. *Four semester hours.*

### **GER-315. Germany Today/Staff**

A study of contemporary German politics, economics and society. Special emphasis will be given to social and political changes before and after Reunification. Prerequisites: German 201, 202 or permission of the instructor. Four hours per week. *Four semester hours.*

### **GER-318. Commercial and Economic German/Staff**

Study of the economy, business organization and commercial practices of Germany with special attention to Germany's role in the European Union. Prerequisite: German 201, 202 or permission of the instructor. Four hours per week. *Four semester hours.*

### **GER-319. Contemporary German Literature/Dr. Thelen**

The 20th-century German short story. Representative short stories from Naturalism to the present with emphasis on the literature since 1945. Prerequisites: German 251, 252, or permission of the instructor. Three hours per week. *Four semester hours.*

### **GER-320. German Novelle/Dr. Clouser**

History and development of the German Novelle from Goethe to the 20th century. Prerequisites: German 251, 252, or permission of instructor. Three hours per week. *Four semester hours.*

### **GER-328. Advanced German Grammar/Staff**

In-depth study of German phonetics, morphology and syntax with special emphasis on the problems related to the teaching of the language. Prerequisites: German 201, 202 or permission of instructor. Four hours per week. *Four semester hours.*

### **GER-335. Independent Study in German/Dr. Clouser**

Individual study of topics in German literature and civilization. Prerequisites: Two 200-level courses and permission of instructor. Two to *Four semester hours.*

### **GER-381. Internship/Staff**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact

the chair of the department for further details. Prerequisites: Junior standing, three courses in German, and approval of a faculty internship adviser. Twelve to sixteen hours per week. *Four semester hours.*

### **GER-401W. German Medieval Studies/Dr. Thelen**

Works include Parzival, Tristan, the Nibelungenlied and Minnesang. This course satisfies the College requirement of a capstone experience. Prerequisites: German 251, 252, or permission of instructor. CST 201 is strongly recommended. Three hours per week. *Four semester hours.*

### **GER-402W. Classical Literature of the 18th and 19th Centuries/Dr. Clouser**

Writers include Lessing, Goethe, Schiller, Kleist, Keller and Hauptmann. This course satisfies the College requirement of a capstone experience. Prerequisites: German 251, 252, or permission of the instructor. CST 201 is strongly recommended. Three hours per week. *Four semester hours.*

**GER-403W. Advanced Seminar/Staff**  
Topics vary. This course satisfies the College requirement of a capstone experience. Prerequisites: German 251, 252, or permission of instructor. CST 201 [CA 100] is strongly recommended. Three hours per week. *Four semester hours.*

### **GER-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the department chair. This course does not satisfy the College requirement of a capstone experience. *Four semester hours.*

### **GER-492W. Research/Independent Work/Staff**

A continuation of course 491. This is a writing-intensive course and at least one formal oral presentation is required. This course satisfies the College requirement of a capstone experience. Prerequisites: German 491 and permission of the department chair. CST 201 is strongly recommended. *Four semester hours.*

## JAPANESE

The Japanese language courses are designed to develop linguistic skills and an understanding of Japanese culture. The study of Japanese is recommended for students interested in majoring in East Asian Studies or International Relations. Students may also pursue a student-initiated major that includes the study of Japanese. In language labs, which are required for all classes, students work with computers, authentic video and audio materials, as well as native speakers. Ursinus is one of two institutions in Pennsylvania to offer a teacher certification program in Japanese.

**JAPN-101. Elementary Japanese I/  
Dr. Mizenko**

An introduction to the Japanese language. The course is designed to expose the students to the basic rules of spoken and written Japanese. Four hours per week plus one hour of language lab. *Four semester hours.*

**JAPN-102. Elementary Japanese II/  
Dr. Mizenko**

Continuation of Japanese 101. The focus is placed on situation-sensitive language use. Different verb forms (te-form and plain form), as well as some basic Kanji are introduced. Prerequisite: Japanese 101 or equivalent. Four hours per week plus one hour language lab. *Four semester hours.*

**JAPN-111. Advanced Elementary  
Japanese/Dr. Mizenko**

A review of fundamental structures of Japanese with emphasis on conveying various intentions and nuances. Developing communication skills is one of the goals. Prerequisite: Japanese 102 or equivalent. Four hours per week plus one hour of language lab. *Four semester hours.*

**JAPN-112. Advanced Elementary  
Japanese II/Dr. Mizenko**

Continuation of Japanese 111. The main focus of the course is to develop fluency. Further study of Kanji makes reading authentic texts such as letters and plays possible. Prerequisites: Japanese 111 or equivalent. Four hours per week plus one hour of language lab. *Four semester hours.*

**JAPN-211. Intermediate Japanese/  
Dr. Mizenko**

Continuation of Japanese 112. Intensive review of structures and further develop-

ment of communication skills. Intensive study of Kanji to expand vocabulary through authentic texts, such as newspapers and magazines. Prerequisite: Japanese 112 or equivalent. Four hours per week plus one hour of language lab. *Four semester hours.*

**JAPN-212. Topics in Japanese Society,  
Culture and Literature/  
Dr. Mizenko**

Continuation of Japanese 211. The class discussions and readings are organized around various topics selected by both the students and the instructor. Prerequisite: Japanese 211 or equivalent. Four hours per week plus one hour of language lab. *Four semester hours.*

**JAPN-301. Independent Study in  
Japanese/Dr. Mizenko**

Independent study of selected topics in Japanese. May be taken more than once. "Japanese for Teachers: Language acquisition and pedagogy" is the suggested topic for students seeking teacher certification in Japanese. Prerequisite: Japanese-212 or equivalent and permission of the instructor. *Four semester hours.*

**JAPN-328. Advanced Japanese  
Language/Dr. Mizenko**

A study of Japanese linguistics: syntax, phonology, semantics, morphology, and pragmatics. Required of students seeking teacher certification in Japanese. Prerequisite: Japanese 212 or equivalent. *Four semester hours.*

## MODERN LANGUAGES/SPANISH

### SPANISH

Spanish majors are required to take a minimum of 36 credit hours in Spanish at the 200, 300 and 400 levels, excluding Spanish 332. Spanish 251, 252, and at least one 400-level W course are required, as well as a study abroad experience as approved by the department.

#### **SPAN-101. Elementary Spanish I/Staff**

Development of the four skills of listening, speaking, reading and writing. Designed for beginners or students with little or no recent study of the language. Four hours per week plus one hour of language laboratory. *Four semester hours.*

#### **SPAN-102. Elementary Spanish II/Staff**

Continuation of Spanish 101. Four hours per week plus one hour of language laboratory. *Four semester hours.*

#### **SPAN-111. Intermediate Spanish I/ Staff/Dr. Hardin**

A review of the basic grammatical structures of Spanish, with emphasis on the use of tenses and the subjunctive mood, vocabulary development through readings and use of authentic materials, and cultural and elementary literary readings. Prerequisite: Spanish 102. Four hours per week plus one hour of language laboratory. *Four semester hours.*

#### **SPAN-112. Intermediate Spanish II/ Staff**

Although Intermediate Spanish II is a continuation of Intermediate Spanish I, students may be placed in this course if they can demonstrate a good command of the basic structures of the Spanish grammar. The main focus of this course will be in the strengthening of vocabulary and the written command of the language through the use of authentic materials, literary readings, and writing of short compositions. Prerequisite: Spanish 111 or equivalent. Four hours per week plus one hour of language laboratory. *Four semester hours.*

#### **SPAN-117. Spanish for Business and Economics/Staff**

Designed for students interested in the field of international business. Emphasis will be put on the development of the specialized vocabulary of business and the study of cultural differences between the U.S. and the Hispanic world that may play a role in business relations. This course may be used toward fulfillment of the language require-

ment. Prerequisite: Spanish 111 or equivalent. Four hours per week. *Four semester hours.*

#### **SPAN-118. Spanish for the Health Professions/Staff**

This course is designed for students interested in medicine or an allied health field. Grammar review and vocabulary development will be emphasized through readings. Oral competency in the medical vocabulary and ability to respond in emergency circumstances are an important part of the course. This course may be used toward fulfillment of the language requirement. Prerequisite: Spanish 111 or equivalent. Four hours per week. *Four semester hours.*

#### **SPAN-200. Summer Study in Mexico/ Staff**

A four-week course including classroom study, family residence and travel in Mexico directed by members of the Ursinus faculty. Offered annually. Prerequisites: Spanish 112, 118 or permission of instructor. *Four semester hours.*

#### **SPAN-201. Conversation and Composition/Dr. de Arana/ Dr. Cameron/Dr. Hardin**

Intensive review of the grammar to perfect oral and written communication. Materials used will be predominantly literary (short plays and short stories), but also journalistic. Writing will be both formal and informal. Four hours per week plus one hour of conversation with the language assistant. Prerequisite: Spanish 112 or 118 or equivalent. *Four semester hours.*

#### **SPAN-202. Topics in Hispanic Literature and Culture/ Dr. de Arana/Dr. Cameron**

Continuation of Spanish 201. Topics, to be determined by interests of students and faculty, might include the short story, Spanish and/or Latin American film, class, gender, race relations as reflected in literature and/or film, and others. Prerequisite: Spanish 201 or permission of the instructor.

## MODERN LANGUAGES/SPANISH

Four hours per week. *Four semester hours.*  
Course can be taken for credit twice but may be counted only once toward the major.

**SPAN-203. Mexican Studies/Staff**  
Study of contemporary Mexico, especially the European and indigenous influences which have contributed to 20th-century Mexican culture, as concrete preparation for future study abroad in Mexico. Spanish 203 includes essential information on Mexican geography, history, politics, customs, society, literature and the arts. Readings come primarily from the works of major Mexican writers. Class discussion in Spanish, guest speakers, Mexican films. Fall semester only. Prerequisite: Spanish 112 or permission of the instructor (on rare occasions may be taken concurrently with Spanish 112). This course does not satisfy the language requirement unless it is taken with Spanish 209. *Two semester hours.*

**SPAN-204.**  
(See Ursinus in Sevilla Program)

**SPAN-207.**  
(See Ursinus in Sevilla Program)

**SPAN-208.**  
(See Ursinus in Sevilla Program)

**SPAN-209.**  
Winter Study in Mexico/Staff

A two-week language course, including 30 hours of classroom study, homestay with a Mexican family, afternoon excursions and weekend travel in Mexico directed by members of the Ursinus faculty. Offered annually during winter break. Students may register for Spanish 209 as part of the regular course load for either semester. Prerequisite: Spanish 203 or permission of the instructor. This course may be used to fulfill the language requirement only if taken twice or in conjunction with Spanish 203. May be taken for credit twice. *Two semester hours.*

**SPAN-251. Survey of Spanish Literature/Dr. de Arana**  
Study of major literary works and genres of Spain from the Middle Ages through the 20th century with special attention given to the literature of the Golden Age, the Generation of 1898, and the post-Civil War period. Prerequisite: Spanish 202 or equivalent. Four hours per week. *Four semester hours.*

**SPAN-252. Survey of Latin American Literature/Dr. Shuru**

Study of major trends in Latin American literature from the Colonial period through the 20th century with emphasis on Latin America's progress toward artistic and literary independence from European models. Prerequisite: Spanish 202 or equivalent. Four hours per week. *Four semester hours.*

300- and 400-level courses are offered in rotation.

**SPAN-317. The Hispanic World/Staff**  
The development of the Hispanic Culture as a conjunction of Eastern and Western experiences and its subsequent expansion and transformation in the Americas. The creation of the American republics, the political and socio-economic crisis of the 20th century and the challenges of the future. Prerequisite: Two of the following: Spanish 201, 202, 251, 252 or permission of the instructor. Four hours per week. *Four semester hours.*

**SPAN-318. Commercial and Economic Spanish/Dr. de Arana**

This course aims to develop cultural sensitivity and to further linguistic competence through the study of the economic situation, business organization and commercial practices of the Hispanic world. Prerequisite: Spanish 201 or 202 or permission of the instructor. Four hours per week. *Four semester hours.*

**SPAN-328. Advanced Spanish Grammar/Dr. de Arana**

In-depth study of Spanish phonetics, morphology and syntax with special emphasis on the problems related to the teaching of the language. Prerequisite: Spanish 201 or equivalent. Four hours per week. *Four semester hours.*

**SPAN-332. Latin American Studies/Dr. Cameron**

(See also under Interdivisional Studies) An interdivisional approach to the study of Latin America. The development of the history, politics, society and literature of Latin American nations will be examined. Readings will be selected from the works of major intellectual figures and writers. Emphasis will be on the 20th century. Weekly lectures, films, and class discussions. The language of instruction is English. Open

## MODERN LANGUAGES/SPANISH

to upperclass students. Four hours per week. *Four semester hours.*

### **SPAN-335. Independent Study in Spanish/Staff**

Individual study of topics in Spanish or Latin American literature or culture. Prerequisites: two 200-level courses and permission of the instructor. Two to *Four semester hours.*

### **SPAN-350. Translation/Staff**

The theory and practice of translation. The course will cover different types of translation: literary, technical, advertising, from English to Spanish and vice versa. It will have a class project consisting of the translation of a short novel, a play, a collection of short stories or the subtitling of a film. Prerequisites: Spanish 328, or permission of the instructor. Three hours per week. *Four semester hours.*

### **SPAN-351. Contemporary Hispanic Theater: History, Text and Performance/Staff**

Study of Spanish and Spanish-American theater from the end of World War II to the present. The course will address the development of the genre, the structure of individual works, as well as the stage techniques. It will also include the production and performance of a short play. Prerequisite: Spanish 251, 252 or permission of the instructor. Three hours per week. *Four semester hours.*

### **SPAN-352. Contemporary Hispanic Novel/Dr. Cameron/Dr. de Arana**

Close readings of texts from a variety of perspectives (including gender, race, class), representing major trends in contemporary fiction (Spain and Latin America). Prerequisite: Spanish 251, 252, or permission of the instructor. Four hours per week. *Four semester hours.*

### **SPAN-381. Internship/ Staff**

An off-campus academic work/experience under the supervision of an internship adviser and an on-site supervisor. Contact the chair of the department for further details. Prerequisites: Junior standing, three courses in Spanish, and approval of a faculty internship adviser. Twelve to sixteen hours per week. *Four semester hours.*

### **SPAN-401W. Golden Age Literature/Dr. Cameron**

The picaresque and the Comedia of the 16th and 17th centuries. This course satisfies the College requirement of a capstone experience. Prerequisite: English 100, Spanish 251, 252, or permission of the instructor. *Four semester hours.*

### **SPAN-402W. Cervantes/Dr. Cameron**

Studies in the structure, sources and the impact of Cervantine prose, with emphasis on the Quijote. This course satisfies the College requirement of a capstone experience. Prerequisites: English 100, Spanish 251, 252 or permission of the instructor. CST 201 is highly recommended. Four hours per week. *Four semester hours.*

### **SPAN-440W. Senior Seminar in Hispanic Studies/Dr. Cameron/Dr. de Arana/Dr. Shuru**

This course satisfies the College requirement for a capstone experience. It will explore topics in linguistic, literary, and cultural studies in the Hispanic world. Prerequisites: English 100, Spanish 251, 252 and senior status or permission of the instructor. CST 201 is highly recommended. Three hours per week. *Four semester hours.*

### **SPAN-491. Research/Independent Work/Dr. Cameron/Dr. de Arana/Dr. Shuru**

This course is open to candidates for departmental honors and to other students with the permission of the department chair. This course does not satisfy the College requirement of a capstone experience. *Four semester hours.*

### **SPAN-492W. Research/Independent Work/Staff**

A continuation of course 491. This is a writing-intensive course and at least one formal oral presentation is required. This course satisfies the College requirement of a capstone experience. Prerequisites: Spanish 491 and permission of the department chair. CST 201 is highly recommended. *Four semester hours.*

**URSINUS IN SEVILLA**

A program for students interested in continuing the study of Spanish beyond the language requirement. Offered during the Fall semester at the Instituto Universitario de Sevilla (I.U.S., Sevilla, Spain). Students will obtain 12 to 16 credits in Spanish at the 200 level, and perhaps 4 more credits in the Liberal Studies (Core) Curriculum. The semester will be preceded by a 10-day orientation/travel program in Spain.

Sophomores are particularly encouraged to participate, but juniors are also welcome. Completion of at least Spanish 102 or its equivalent is required. Not open to first year students or seniors. A member of the Ursinus faculty will accompany the group from/to the United States, and will teach the World Literature and the Spanish Civilization courses. The language course will be taught by a member of the faculty of I.U.S. While in Sevilla, the students will be housed with families carefully chosen by I.U.S. They will have their meals with those families also. The college reserves the right to cancel this program in any given year if a reasonable number of students do not enroll.

**IDS-101. World Literature I: The Literary Tradition/Staff**

[This section of IDS 101 will have a special emphasis on Spanish literature.]

The following courses are offered only in Sevilla.

**SPAN-204. Intensive Spanish/Staff**

An intensive review of Spanish grammar and further development of reading, writing and speaking skills in the language. Eight hours per week. *Eight semester hours.*

**SPAN-207. Introduction to Spanish Civilization/Staff**

An introduction to Spanish history, culture and civilization from its beginnings to the

present time. The course will make extensive use of the opportunities of Sevilla's metropolitan area: stone age archeological sites, Roman ruins, medieval Spain's Christian, Jewish and Moorish sites, museums, etc. Four hours per week. *Four semester hours.*

**SPAN-208. Introduction to Hispanic Literature/Staff**

A thematic introduction to the literature of Spain and Latin America. Readings will include contemporary short-stories and short plays as well as selections of masterpieces from Spain and the Americas. Four hours per week. *Four semester hours.*

## MUSIC

### MUSIC

*Professor French (Chair); Assistant Professor David; College Organist Alan Morrison.*

### Requirements for Minor in Music

A minor concentration in music consists of a minimum of five courses in music. Two courses must be selected from 100, 205, 206, 207 and 307. An additional two courses must be selected from 121, 222, 225 and 308.

#### **MUS-100. Introduction to Music/ Dr. French**

A course in perceptive listening intended to heighten the student's awareness and understanding of music through an examination of its basic elements — tone color, texture, melody, rhythm and style. The course involves intensive required listening assignments as a means of achieving the awareness and understanding of these elements. Three hours per week. *Four semester hours.*

#### **MUS-121. Fundamentals of Music/ Dr. David**

An introductory course in music theory which presents essential basic concepts, from standard notation and scales to harmonization and motivic structure. Additional emphasis on the acquisition of aural skills through ear-training exercises. Three hours per week. *Four semester hours.*

#### **MUS-205. History of Music I/ Dr. French**

A study of music from its early origins through 1800. Intensive listening assignments and research projects are required in the course. Three hours per week. *Four semester hours.*

Note: Students may not receive credit for Music 205 and Music 201 or 202.

#### **MUS-206 History of Music II/ Dr. French**

A study of music from 1800 to the present. Intensive listening assignments and research projects are required in the course. Three hours per week. *Four semester hours.*

Note: Students may not receive credit for Music 206 and Music 203 or 204.

#### **MUS-207 History of Jazz/Dr. David**

A survey of the development of jazz from its African origins through the present. The course will include intensive listening and research assignments, video presentations,

and a final research paper. Three hours per week. *Four semester hours.*

Note: Students may not receive credit for Music 104 and Music 207.

#### **MUS-222. Harmony/Dr. David**

A study of the materials and practices of tonal harmony through the examination of the techniques of four-part writing. Additional emphasis on the acquisition of aural skills through ear-training exercises. Prerequisite: Music 121 or by permission. Three hours per week. *Four semester hours.*

#### **MUS-225. Jazz Theory/Dr. David**

A study of the melodic, harmonic and rhythmic practices in jazz and how these principles are also applicable to various genres of contemporary music. The course includes analysis of representative chord progressions and compositions. Emphasis will be placed on student projects in jazz composition. Prerequisite: Music 121 or by permission. Three hours per week. *Four semester hours.*

#### **MUS-307. Topics in Music History/ Dr. French**

A study of a specific period of genre of music such as the Second Viennese School, Late Beethoven, American Opera, and others. The course will place emphasis on independent research as well as required listening. Prerequisite: Appropriate 200-level music history course or by permission. Three hours per week. *Four semester hours.*

#### **MUS-328. Topics in Music Theory/ Dr. David**

A study of a specific style or school of composition such as counterpoint, serial music, chromatic harmony and others. The course will place emphasis on independent research as well as required listening. Prerequisite: Appropriate 200-level music



## MUSIC/PENNSYLVANIA GERMAN STUDIES

theory course or by permission. Three hours per week. *Four semester hours.*

### MUS-401. Special Projects in Music/Staff

Advanced independent work on a creative, historical or theoretical project supervised and approved by a faculty adviser. *Four semester hours.*

### ENSEMBLES

NOTE: A student may receive a maximum of four credits for participating in ensembles.

### MUS-001-008. Ursinus College Choir/Dr. French

A large choral ensemble open to everyone in the College community. The College Choir performs three or four major works each year, including performances of Handel's Messiah in the fall semester. Graded S/U. Two hours per week. *One-half semester hour.*

### MUS-011-018. Meistersingers/Dr. French

A small choral ensemble open by audition to all students. The repertoire represents

diverse styles and cultures suitable to a smaller ensemble. Graded S/U. Two hours per week. *One-half semester hour.*

### MUS-021-028. Ursinus College Concert Band/Dr. David

A large instrumental ensemble open to everyone in the College community. Members perform works from the standard band repertoire, transcriptions of important orchestral works, and new compositions. The Concert Band presents two major concerts each year and may appear at campus functions. Graded S/U. Two hours per week. *One-half semester hour.*

### MUS-031-038. Ursinus College Jazz Ensemble/Dr. David

A big band open by audition to all students. The ensemble performs arrangements and original compositions in a variety of jazz styles. The Jazz Ensemble presents two major concerts each year and may appear at campus functions. Graded S/U. Two hours per week. *One half-semester hour.*

## PENNSYLVANIA GERMAN STUDIES

*Professor Gallagher (Coordinator).*

The purpose of Pennsylvania German Studies (PGS) is to examine the origins and values of the Pennsylvania Germans (or Pennsylvania Dutch), their history, customs, arts and folklore. The program aims to increase awareness of cultural aspects of the Pennsylvania Germans; to compare their folk culture with that of other peoples. The Pennsylvania German archives in Myrin Library and the art and artifacts in the Berman Museum of Art offer special opportunities for study and enrichment.

### Minor Concentration

A minor in Pennsylvania German Studies consists of Pennsylvania German Studies 100 and 13 additional credits in PGS.

### PGS-100. Pennsylvania German Culture/Staff

A study of the history, culture and societies of the Pennsylvania Germans, their influence on early American life and their adjustments to the modern world. Three hours per week. *Three semester hours.*

### PGS-203. Pennsylvania German Folklife/ Staff

Classroom study and field techniques related to the folklore, folklife, and folk culture of

the Pennsylvania Dutch country. Prerequisites: PGS-100, or ANTH-100, or HIST-213. Three hours per week. *Three semester hours.*

### PGS-204. Topics in Pennsylvania German Studies/Staff

A course focusing on special topics in Pennsylvania German studies. Prerequisite: Permission of instructor. Three hours per week. *Three semester hours.*

## PENNSYLVANIA GERMAN STUDIES/PHILOSOPHY AND RELIGION

### **PGS-306. Pennsylvania German Art/Staff**

Pattern, symbolism and content in Pennsylvania German folk art. Formal painters of Pennsylvania German origin. Three hours per week. *Three semester hours.*

### **PGS-310. Religious Experiences of the Pennsylvania Germans/Staff**

This course will examine the varieties of

religious sects, denominations and institutions of the Pennsylvania Germans, their attitudes toward religion, as well as the transition to 20th-century religious forms. Prerequisite: Permission of instructor. Three hours per week. *Three semester hours.*

**PGS-351. Independent Study/ Staff**  
Research involves directed readings and research on a topic in Pennsylvania German Studies. Prerequisites: PGS 100 and permission of the instructor. *Three semester hours.*

## **PHILOSOPHY AND RELIGION**

*Professors Hardman, Stern; Associate Professors Goetz (Chair), Assistant Professor Rice; Lecturer Gildea.*

The purpose of the department of philosophy and religion is to develop the student's ability to think clearly and critically and to understand the major philosophical and religious positions of both the past and the present. As means to accomplishing these goals, the department offers a major in philosophy and a major in philosophy and religion, as well as a minor in philosophy and a minor in religion.

### **PHILOSOPHY**

For the student who is interested in a major in philosophy, the department offers the opportunity to think about the best way in which to live one's life and the nature of things. In pursuing this opportunity, the student of philosophy necessarily considers the most basic questions that an individual can ask: "Why do I exist?," "What am I?," "What is a good life?," and "How do I live with others?" By majoring in philosophy, a student will become proficient in thinking, speaking, and writing about these questions in an informed and coherent manner.

### **Requirements for Philosophy Majors**

A major in philosophy requires Philosophy 202, 204, 237; five of the following: 302, 303, 305, 337, 338, 339, 343; and one of the following: 404W, 437W.

### **Requirements for Philosophy Minors**

A minor concentration in philosophy consists of 202, 204, 237 and three of the following: 302, 303, 305, 337, 338, and 339.

### **Philosophy and Religion**

For the student who is interested in a major in philosophy and religion, the department provides the opportunity to develop informed awareness and critical appraisal of philosophical perspectives, as well as providing opportunity for a scholarly and appreciative study of historic and contemporary religious insights. In this manner, the department strives to translate into the terms of today's academic interests the traditional roles both disciplines have played in liberal education.

**Requirements for Philosophy and Religion Majors**

Majors must take 36 hours of work within the department, including 101, 102, 201, 202, 211, 404W, which are required. Each major is also encouraged to earn a minor in another field of study.

**Requirements for Religion Minors**

A minor concentration in religion consists of 101, 102, 201, 211, and two of the following: 212, 215, 216, 221, and 223.

**PHIL-101. Knowledge, Value and Reality/Dr. Hardman, Dr. Goetz, Dr. Stern**

An introductory study of ideas about knowledge, morality, and what is real in their historical context. Attention will be given to texts from both Western and non-Western cultures. Short analytical papers will be required in which students develop their own thoughts on an issue. Philosophy 101 and 102 need not be taken in sequence. Three hours per week. *Four semester hours.*

**PHIL-102. Minds, Science, and Religion/Dr. Hardman, Dr. Goetz, Dr. Stern**

An introductory study of ideas about religion, consciousness, and science in their historical context. Attention will be given to texts from both Western and non-Western cultures. Short analytical papers will be required in which students develop their own thoughts on an issue. Philosophy 101 is not a prerequisite. Three hours per week. *Four semester hours.*

**PHIL-103. General Problems of Philosophy/Staff**

A study designed to orient the student with reference to perennial problems of philosophical inquiry. Intensive use is made of primary sources. Three hours per week. *Four semester hours.*

**PHIL-104. Contemporary Philosophy/Staff**

A study of late 19th-century and 20th-century philosophers and trends in philosophic thought beginning with Nietzsche and Moore. Intensive use is made of primary sources. Three hours per week. *Four semester hours.*

**PHIL-105. Great Thinkers/Dr. Hardman/Dr. Goetz**

Intensive study of important theologians and philosophers, such as Plato, Aristotle,

Augustine, Kant, and others, utilizing in each case original source materials. Three hours per week. *Four semester hours.*

**PHIL-115. Business Ethics/Dr. Hardman/Dr. Goetz**

The nature of ethical principles as applied to the business world. Using the case study approach, an analysis of problems such as pollution, whistle blowing, and employee rights. Three hours per week. *Four semester hours.*

**PHIL-201. Introduction to Religion/Dr. Hardman**

A survey of numerous issues important in the study of religion, such as the psychology of religion, myth, politics and religion in American culture, and others. Three hours per week. *Four semester hours.*

**PHIL-202. Logic/Dr. Goetz**

A study of formal logic in which the student is taught how to translate sentences in ordinary English into the formal language of propositional and predicate logic. Emphasis is placed on recognizing logical connectives and quantifiers in ordinary language and becoming proficient in the natural deduction proof technique. Four hours per week. *Four semester hours.*

**PHIL-204. Ethics/Dr. Goetz**

A study of various ethical theorists with regard to their attempts to give an account of such concepts as the human good, virtues, the role of motive and consequences in determining right and wrong conduct, and the like. Readings on practical issues (e.g., punishment and abortion) are included in an effort to explore how the various theories relate to practice. Three hours per week. *Four semester hours.*

**PHIL-211. World Religions/Dr. Hardman**

An introduction to major living religions, with special attention to Oriental religions.

## PHILOSOPHY AND RELIGION

An examination of the leading problems of religious thought, and to the alternative approaches of world religions to ultimate questions concerning the meaning of human life. Three hours per week. *Four semester hours.*

### **PHIL-212. Hebrew History and Scriptures/Dr. Hardman**

Foundations of the Judeo-Christian tradition in the literature and thought of the Old Testament. Attention is given to the archeological and historical background of the Old Testament, as well as to the biblical materials themselves. Three hours per week. *Four semester hours.*

### **PHIL-214. Introduction to Judaism/Staff**

Attention is given to the history, traditions, and literature of the Jewish people from their origins in the second millennium B.C.E. to the present day. Stress is given to specific religious concepts and teachings which are pertinent to modern times. Three hours per week. *Three semester hours.*

### **PHIL-215. The New Testament: The Gospels/Dr. Hardman**

By means of various methods of study, the life and teachings of Jesus as set forth in the four Gospels are examined. Attention is given to the geography, politics, sociology, and religion of the first century A.D. Three hours per week. *Four semester hours.*

### **PHIL-216. The New Testament: Pauline Epistles/Dr. Hardman**

Attention is given to the life, ministry, and writings of Paul. The doctrinal, pastoral, and personal epistles of Paul are studied with reference to their historical settings, the organization of the Apostolic church, and the development of Christian doctrine. Three hours per week. *Four semester hours.*

### **PHIL-221. Religion in American Culture/Dr. Hardman**

A systematic examination of religion in the United States as a philosophy of life, attitude, tradition, and organization. The beliefs and thoughts of Protestants, Catholics, and Jews from the colonial period to modern times are studied. Three hours per week. *Four semester hours.*

### **PHIL-223. The Christian Religious Tradition/Dr. Hardman**

A survey of important thinkers, literature and movements typical of the Christian tradition through the 20th century. Careful study of Augustine, Abelard, Aquinas, Duns Scotus, Occam, Luther, Edwards and others is included. Three hours per week. *Four semester hours.*

### **PHIL-224. Literature and Religious Ideas/Dr. Hardman**

An analysis of the significant themes common to works of imaginative literature exploring the interrelation of religion and artistic creativity. Attention will be given to Camus, Eliot, Faulkner, Kazantzakis, Waugh, and others. Three hours per week. *Four semester hours.*

### **PHIL-237. Political Philosophy**

Same as Politics 237.

### **PHIL-302. Philosophy of Religion/Dr. Goetz**

A philosophical study of both belief itself as a psychological attitude and what has been believed about God. Particular attention is given to such questions as whether or not belief is a matter of choice and whether or not one must have a reason to believe in God. Questions about the natures of God and man, evil and immortality are also addressed. Three hours per week. *Four semester hours.*

### **PHIL-303. Philosophy of Mind/Dr. Goetz**

An examination of various arguments for and against different views of what a person or self is. Attention is given both to the claim that a person is a soul or mind which is distinct from its physical body and to the conflicting assertion that a self is identical with its body or brain. Three hours per week. *Four semester hours.*

### **PHIL-305. Philosophy of Action/Dr. Goetz**

An examination of what human action is, how it is explained, and whether it is free or determined. The examination raises such issues as how explanations in science are related to explanations of human behavior in terms of reasons, whether there is a science of human behavior, and for what, if any, behavior human beings are responsible. Three hours per week. *Four semester hours.*

## PHILOSOPHY AND RELIGION/PHYSICS AND ASTRONOMY

### PHIL-309. Selected Topics/

**Dr. Hardman/Dr. Goetz**

Content for the course will be drawn from either philosophy or religion, concentrating on special issues, movements and leaders in both areas. Three hours per week. *Four semester hours.*

### PHIL-314. Seminar in Biomedical Ethics/Staff

An examination of ethical decision-making procedures available to health care professionals who face dilemmas caused by acute medical problems and the technological advances in the delivery of health care. Opportunity is given to apply decision-making processes to the major issues in biomedical ethics. Students present papers exploring a dilemma, its empirical and evaluative elements, and proposing an ethical resolution. Prerequisite: Permission of the department. Limited to 20 students. Three hours per week. *Four semester hours.*

### PHIL-315 (ENV/PHIL).

**Environmental Ethics/Staff**

The central issue in environmental ethics concerns what things in nature have moral standing and how conflicts of interest among them are to be resolved. After an introduction to ethical theory, topics to be covered include anthropocentrism, the moral status of non-human sentient beings, preservation of endangered species and the wilderness, holism versus individualism, and the land ethic. Three hours per week. *Four semester hours.*

### PHIL-337. Classical Political Philosophy

Same as Politics 337.

### PHIL-338. Modern Political Philosophy

Same as Politics 338.

### PHIL-339. Contemporary Political Philosophy

Same as Politics 339.

### PHIL-343. The History of Chinese Thought and Religion

Same as History 343.

### PHIL-381. Internship/Staff

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the chair of the department for further details. Prerequisites: junior or senior standing and approval of a faculty internship adviser. Eleven to 14 hours per week. *Four semester hours.*

### PHIL-404W. Senior Seminar: Current Issues and Movements in Philosophy and Religion/Dr. Hardman/Dr. Goetz

The aim of this capstone course is threefold: 1) A comprehensive grasp of the interrelatedness of the various courses in the major field; 2) an overview of the relation of the major field of study to the liberal arts program; 3) a study of the relevance of philosophy and religion to the contemporary situation. There will be several papers and oral presentations. Prerequisite: English 100. Open only to philosophy and religion majors or by departmental permission. Three hours per week. *Four semester hours.*

### PHIL-437W. Seminar in Political Philosophy

Same as Politics 437W.

### PHIL-491W. Research/Independent Work/Dr. Hardman/Dr. Goetz

This course is open to candidates for departmental honors and to other students with the permission of the departmental chair. *Four semester hours.*

### PHIL-492W. Research/Independent Work/Dr. Hardman, Dr. Goetz

A continuation of Philosophy 491. Prerequisite: Philosophy 491. *Four semester hours.*

## PHYSICS AND ASTRONOMY

*Professor Takats (Chair); Associate Professor Nagy, Assistant Professor Cellucci.*

The courses in physics are designed to give the student an understanding of the logic and structure of physics. Methods of analysis and presentation

## PHYSICS AND ASTRONOMY

of concepts and ideas are emphasized. Laboratory work demonstrates the dependence of physical theory on experimentation.

### Requirements for Majors

#### I. Physics Track

Students must take the following courses: Chemistry 105, 105a, 206, 206aQ; Mathematics 111 or 108, 112, 211; Physics 111Q, 112, 207, 209, 210, 210a, 212, 308W, 315, either 450 or 492W, and at least two of the following: 301, 304, 309, 316, 401, 408, 410.

#### II. Astrophysics Track

Students must take the following courses: Chemistry 105, 105a, 206, 206aQ; Mathematics 111 or 108, 112, 211; Physics 111Q, 112, 121, 122, 207, 209, 210, 210a, 212, 301, 315, 358W, at least two credits of research (from 411, 412, 421, 422, 491) and either 450 or 492W.

Students anticipating graduate study in physics or astrophysics should select additional courses from Physics 304, 309, 316, 401, 408, 410, and from Mathematics 214, 235, 462.

### Requirements for Secondary School Teaching Certification

Students must take Biology 100 or 111; Chemistry 105, 105a, 206, 206aQ; Mathematics 111 or 108, 112, 211; Physics 111Q, 112, 101Q or 201, 207, 209, 210, 210a, 212, 308W, either 450 or 492W.

### Requirements for Minors

A minor concentration in physics consists of Mathematics 111 or 108, 112; Physics 111Q, 112, 207, and a minimum of seven credits selected from 209, 210, 210a, 212, 304, 308W, 309, 315, 316, 401, 408, 410, including at least one of the following: 209, 210a, 308W.

A minor concentration in astronomy consists of Physics 101Q, 111Q, 112, 201, 301, and a minimum of three credits of seminar from the following topics: solar system astronomy, celestial mechanics, galactic astronomy, astrometry. Students in the pre-engineering program take Chemistry 105, 105a, 206, 206aQ; Mathematics 111, 112, 211, 214, 271; Physics 111Q, 112, 207, 209, 212. Additional courses in chemistry, mathematics, and physics are chosen in consultation with the pre-engineering adviser. The courses are determined by the particular field of engineering the student plans to enter.

#### PHYS-100Q. Introduction to Physics/Staff

A survey of classical physics with emphasis on its structure and intellectual development as well as its application to problems of society. Concepts of motion, energy,

sound, light, electricity, and magnetism. This course assumes no previous study in physics. A working knowledge of high school algebra is assumed. Three hours lecture and two hours laboratory per week.  
*Four semester hours.*

## PHYSICS AND ASTRONOMY

### **PHYS-101Q. Introduction to**

#### **Astronomy/Dr. Nagy**

An introduction to the methods and concepts of modern astronomy: physical principles, telescopic observations of the moon, sun, stars, and planets, measuring the physical properties of stars, star formation.

Prerequisite: a working knowledge of high school algebra. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

### **PHYS-111Q. General Physics I/Staff**

A study of mechanics and thermodynamics, utilizing mathematics in the presentation and in exercises. Three hours of lecture and three hours of lab per week. *Four semester hours.*

### **PHYS-112. General Physics II/Staff**

A study of waves, electricity, magnetism, and light, utilizing mathematics in the presentation and in exercises. Prerequisite: Physics 111Q; Mathematics 107 or equivalent. Three hours of lecture and three hours of lab per week. *Four semester hours.*

### **PHYS-201. Topics in Modern Astronomy/Dr. Nagy**

Stellar evolution, solar system astronomy, galaxies, the creation and evolution of the universe, the search for extraterrestrial intelligence. Prerequisite: Physics 100Q or 101Q. Three hours of lecture and two hours of laboratory per week. *Four semester hours.*

Students having credit for Physics 301 may not receive credit for Physics 101Q or 201.

### **PHYS-207. Modern Physics/Staff**

Special relativity, origins of quantum theory, physics of atoms, molecules, solids, nuclei, and elementary particles. Class work will include experiments which demonstrate the physical principles. Prerequisite: Physics 112. Four hours per week. *Four semester hours.*

### **PHYS-209. Circuits/Dr. Cellucci**

Foundations of analog and digital circuits. D-C and A-C circuits, transistors, operational amplifiers, digital electronics. Prerequisite: Physics 110 or 112. Three hours lecture and three hours laboratory per week. Offered spring semester. *Four semester hours.*

### **PHYS-210. Mechanics I/Staff**

Vectors, statics, vector calculus, kinematics of a particle, dynamics of a particle, energy, harmonic motion, moving reference sys-

tems, central forces. Prerequisites: Physics 112; Mathematics 112. Three hours per week. Offered fall semester. *Three semester hours.*

### **PHYS-210a. Laboratory in Mechanics I/Staff**

Laboratory work (optional) for Physics 210. Three hours per week. Offered fall semester. *One semester hour.*

### **PHYS-212. Classical and Quantum Mechanical Wave/Dr. Nagy**

The behavior of classical waves, wave-particle duality, state functions and probability densities, the Schrodinger wave equation, one-dimensional quantum mechanical problems, prediction and measurement in quantum mechanics. Class work will include experiments which demonstrate the physical principles. Prerequisites: Physics 112; Mathematics 112. Four hours per week. *Four semester hours.*

### **PHYS-301. Introduction to Astrophysics/Dr. Nagy**

Astrometry, astronomical photometry, CCD imaging and image processing, spectroscopy. The astronomical two-body problem, tidal forces, the Sun and planets, observable properties of stars, stellar structure and evolution, binary stars, galaxies and cosmology. Prerequisites: Physics 112, Mathematics 111; pre- or corequisites: Mathematics 112. Three hours lecture and three hours lab per week. *Four semester hours.*

### **PHYS-304. Thermodynamics/Staff**

Primarily classical thermodynamics with a brief introduction to statistical aspects. Temperature, laws of thermodynamics, work, heat, energy, entropy, thermodynamic potentials, kinetic theory of dilute gases, equations of state. (Alternates with 410.) Prerequisites: Physics 112, Mathematics 211. Three hours per week. *Three semester hours.*

### **PHYS-308W. Modern Physics Laboratory/Staff**

Experimental investigations of the principles of modern physics, with emphasis on laboratory techniques and the written communication of scientific results. Prerequisites: Physics 207, 212, English 100. Six hours of laboratory per week. *Three semester hours.*

## PHYSICS AND ASTRONOMY

### **PHYS-309. Electric and Magnetic Fields/Dr. Takas**

Electric and magnetic fields and potentials, Laplace's equation, dielectrics and magnetic materials, Maxwell's equations, electromagnetic waves. Prerequisites: Physics 112, Mathematics 211. (Alternates with 401.) Three hours per week. *Three semester hours.*

### **PHYS-315. Mathematical Physics I/Dr. Nagy**

Ordinary differential equations, special functions of mathematical physics, linear algebra, coordinate transformations, vector analysis, Fourier series, numerical solution of algebraic equations. Prerequisites: Physics 112, Mathematics 211. Four hours per week. *Four semester hours.*

### **PHYS-316. Mathematical Physics II/Dr. Nagy**

Complex analysis, partial differential equations, numerical integration and differentiation, numerical solution of ordinary differential equations, Fourier and Laplace transforms. Prerequisite: Physics 315. Four hours per week. *Four semester hours.*

### **PHYS-317. Seminar/Staff**

Study and discussion of advanced topics or recent developments in physics. Students must consult the chair of the department before registering for this course. Three hours per week. *Three semester hours.*

### **PHYS-318. Seminar/Staff**

Same description as Physics 317. Three hours per week. *Three semester hours.*

### **PHYS-358W. Seminar in Astrophysics/Staff**

Study and discussion of advanced topics or recent developments in astrophysics, with emphasis on the written communication of scientific results. Prerequisite: Physics 301. Three hours per week. *Three semester hours.*

### **PHYS-401. Applications of Quantum Mechanics/Staff**

The hydrogen atom, angular momentum, systems of identical particles, perturbation theory, and other applications selected from atomic, molecular, solid-state, and nuclear physics. Prerequisite: Physics 212. (Alternates with 309.) Three hours per week. *Three semester hours.*

### **PHYS-408. Materials Science/Staff**

Application of physical, chemical and thermodynamic principles to the understanding of materials. Materials considered include metals, polymers, ceramics, composites and semiconductors (the same course as Chemistry 408). Offered spring semester of even-numbered years. Pre- or corequisites: Either Chemistry 112 and Physics 212 or Chemistry 310. Three hours per week. *Three semester hours.*

### **PHYS-410. Mechanics II/Staff**

Dynamics of a system of particles, mechanics of rigid bodies, general motion of a rigid body, Lagrange's equations, Hamilton's equations, theory of vibrations. Prerequisites: Physics 210, Mathematics 211. (Alternates with 304.) Three hours per week. *Three semester hours.*

### **PHYS-411. Research/Staff**

Investigations, of experimental or theoretical nature, pursued independently by the student. The preparation of a summarizing report is required. To register for this course, a student must have the consent of a member of the physics staff to serve as the adviser. *One semester hour.*

### **PHYS-412. Research/Staff**

Continuation of Physics 411. *One semester hour.*

### **PHYS-421. Research/Staff**

Same as Physics 411, but more extensive in scope. *Two semester hours.*

### **PHYS-422. Research/Staff**

Continuation of Physics 421. *Two semester hours.*

### **PHYS-431. Research/Staff**

Same as Physics 421, but more extensive in scope. *Three semester hours.*

### **PHYS-432. Research/Staff**

Continuation of Physics 431. *Three semester hours.*

### **PHYS-450. Senior Seminar/Staff**

Investigation and discussions of recent developments in physics, with emphasis on oral communication of scientific results. Open to physics majors in their senior year or in their junior year with permission of the departmental chairperson. One hour per week. *One semester hour.*



## PHYSICS AND ASTRONOMY/POLITICS AND INTERNATIONAL RELATIONS

### PHYS-491. Research/Independent Work/Staff

This course is open to candidates for departmental honors and to other students with the permission of the departmental chairman. *Three semester hours.*

### PHYS-492W. Research/Independent Work/Staff

A continuation of Physics 491. Writing a major paper and giving an oral presentation are required. Prerequisites: English 100, Physics 491. *Four semester hours.*

## POLITICS AND INTERNATIONAL RELATIONS

*Professors Fitzpatrick, Hood (Chair) Stern; Associate Professor Kane; Assistant Professor Evans.*

The general objectives of the department of politics and international relations are:

- 1) To challenge students to evaluate their conceptions of the good life for the individual and for society.
- 2) To prepare students for lives of enlightened and responsible citizenship.
- 3) To help students attain knowledge of the theory and practice of politics.
- 4) To help students develop the faculties of expression and critical thinking.

### The professional objectives are:

- 1) To prepare students for graduate work in politics, law, and public service.
- 2) To prepare students for examinations required for governmental service.
- 3) To prepare students to be political leaders.

### Requirements for Politics Majors

A major in politics requires Politics 100, 218, 237, 242, 252, one seminar at the 400 level, plus four additional courses.

### Secondary School Teaching Certificate

In addition to the basic requirements of the major, students seeking a teaching certificate in social studies must be enrolled in the College's teacher education program. Substantial further coursework outside of either major is required in order to prepare the student for actual subject matters taught in the secondary curriculum. Students who wish teaching certification should consult their departmental adviser and the chair of the department of education as early as possible, preferably at the end of the freshman year. Students and their advisers should also consult the education department booklet, Ursinus College Teacher Education Programs.

## POLITICS AND INTERNATIONAL RELATIONS

### Requirements for Politics Minors

A minor in politics consists of Politics 100; two courses from among Politics 218, 237, 242, 252; and two courses at the 300 or 400 level.

**POL-100. Politics and Government/  
Dr. Evans/Dr. Fitzpatrick/  
Dr. Hood/Dr. Kane/Dr. Stern**

Great works in political behavior, comparative institutions, methodology, international politics, and political theory create the framework for explaining politics and conducting basic research. Three hours per week. *Four semester hours.*

**POL-199. Special Topics in Politics/  
Staff**

An occasional course that examines particular political issues and events. Three hours per week. *Four semester hours.*

**POL-218. American Government/  
Dr. Fitzpatrick**

A critical examination of the institutions, processes, policies, and underlying principles of the American political system. Topics include the Constitution, interest groups, parties and elections, the presidency, Congress, the bureaucracy, and the judiciary. Prerequisite: Politics 100. Three hours per week. *Four semester hours.*

**POL-237. Political Philosophy/  
Dr. Stern**

This course examines the nature of justice through a careful reading of major works in the history of political philosophy. Specifically, we will consider selected political writings of Plato, Aristotle, Machiavelli, Hobbes, Locke, and Marx. Prerequisite: Politics 100. Three hours per week. *Four semester hours.*

**POL-242. Comparative Politics/  
Dr. Evans/Dr. Hood**

The structure and function of governments and political groups will be compared to develop basic theory. Representative Western, Third World, and Communist systems will be studied. Prerequisite: Politics 100. Three hours per week. *Four semester hours.*

**POL-252. International Politics/  
Dr. Evans/Dr. Hood**

General theory, simulations, games, and case studies explain the relations between states and the roles of politics, individuals, and international law and organizations in the

making and resolving of conflict.

Prerequisite: Politics 100. Three hours per week. *Four semester hours.*

**POL-299. Tutorial in Politics and  
International Relations/  
Staff**

Individual study and directed reading of a particular topic or book within the discipline. Students will work closely with a member of the department in selecting, reading, and discussing the topic, and in determining a proper written assignment. Prerequisites: Politics 100 and prior permission of the instructor. One hour per week. One semester hour.

**POL-310. Congress and the  
Presidency/Dr. Fitzpatrick**

The decision-making process in Congress and the executive branch with emphasis on the interaction of the branches in their struggle to make and apply policy. Prerequisite: Politics 218. Three hours per week. *Four semester hours.*

**POL-321. Constitutional  
Interpretation I/  
Dr. Fitzpatrick**

The role of the Supreme Court in the interpretation and enforcement of the Constitution is examined through analysis of leading cases. Judicial review, powers of Congress and the President, and the division of powers between the national and state governments are among the topics considered. Prerequisite: Politics 218. Three hours per week. *Four semester hours.*

**POL-322. Constitutional  
Interpretation II/  
Dr. Fitzpatrick**

The role of the Supreme Court in the interpretation and enforcement of individual rights within a system of limited government. Substantive and procedural due process, freedom of expression and conscience, and equal protection of the law are among the topics considered. Prerequisite: Politics 218. Three hours per week. *Four semester hours.*

## POLITICS AND INTERNATIONAL RELATIONS

### **POL-323. American Local Government/Staff**

The structure, policies, and problems of local government institutions in the American Federal system. Intergovernmental relations, citizen participation, policy development, leadership, and service performance are all considered. Prerequisite: Politics 218. Three hours per week. *Four semester hours.*

### **POL-324. Political Parties and Elections/Dr. Fitzpatrick**

An examination of the evolution of the American two-party system and the increasingly volatile nature of the American electorate. Topics include the dynamics of party realignment, the changing characteristics of the American voter, the politics of presidential selection, and the consequences of party and electoral reform. Prerequisite: Politics 218. Three hours per week. *Four semester hours.*

### **POL-325. The Judicial Process/Dr. Fitzpatrick**

Proceeding from the idea that the judicial process is essentially a political process, this course will examine the ways in which participants in the judicial process—particularly judges—reach decisions, engage in politics, and affect public policy. Prerequisite: Politics 218. Three hours per week. *Four semester hours.*

### **POL-326 (ENV/POL). Environmental Law/Dr. Kane**

The study of various state, national, and international legal patterns that have arisen to address environmental concerns. The environmental field will be used to examine the nature and effectiveness of civil, criminal, and administrative action to address a complicated and important social issue. Topics will include federal administrative law; international trade and environmental regulation; control of toxic substances and hazardous wastes; the impact of scientific uncertainty on regulation; federal regulatory programs; civil liability under federal regulations; citizen suits; and the preservation of natural areas. Prerequisites: Politics 100, Politics 218 for Politics and International Relations majors or permission of the instructor. Three hours per week. *Four semester hours.*

**POL-328 Law and Society/Dr. Kane**  
A study of the origins, objectives, and manifestations of law in the United States political system. The case method of analysis is used to identify the salient features of the major classes of law and to evaluate the judicial procedures and institutions by which law is applied in the United States. Prerequisite: Politics 218. Three hours per week. *Four semester hours.*

### **POL-329. Public Administration/Dr. Kane**

A survey of the field of public administration, emphasizing administrative organization, fiscal management and personnel management. The administrative process is considered as a unit encompassing Federal, state and local administration. Prerequisite: Politics 218. Three hours per week. *Four semester hours.*

### **POL-330. American Political Thought/Dr. Stern**

This course examines the founding principles of our regime and the problems inherent in those principles as revealed by the great crises of our history. Accordingly, we will examine carefully the speeches and writings of those statesmen who founded the regime as well as those who guided it through its crises. Readings will include the works of Jefferson, Madison, Hamilton, the Anti-Federalists, Lincoln, Frederick Douglass, Wilson, and F.D.R. Prerequisite: Politics 237. Three hours per week. *Four semester hours.*

### **POL-337. Classical Political Philosophy/Dr. Stern**

This course examines the classical understanding of politics through a careful reading of selected works of Plato and Aristotle. We will consider such issues as the nature of justice, the meaning of moral and intellectual virtue, and the relation between philosophy and politics. Prerequisite: Politics 237. Three hours per week. *Four semester hours.*

### **POL-338. Modern Political Philosophy/Dr. Stern**

This course examines and evaluates the world-revolutionary challenge to classical and medieval political philosophy posed by such writers as Machiavelli, Hobbes, Spinoza, Locke, Rousseau and Hegel. Prerequisite: Politics 237. Three hours per week. *Four semester hours.*

**POL-339. Contemporary Political Philosophy/Dr. Stern**

This course examines selected authors and issues in contemporary political philosophy. We will read the works of such authors as Nietzsche, Heidegger, Kojève, Rawls and Foucault. We will consider such issues as historicism, contemporary liberalism, feminism, and Marxism. Prerequisite: Politics 237. Three hours per week. *Four semester hours.*

**POL-344. Political Development/Dr. Evans/Dr. Hood**

An analysis of political change in developed and less-developed countries, focusing on the various theories used to explain socioeconomic and political conditions, and development strategies among several political systems in the international community. Prerequisite: Politics 242. Three hours per week. *Four semester hours.*

**POL-345. Democracy and Politics in Latin America./Dr. Kane**

Study of the patterns of government and politics in the Caribbean, and Latin America and of the views of democracy held by Latin American political leaders and theorists. Mexico will be used as a point of departure with each student researching one additional assigned country. Prerequisite: Politics 242 or consent of the instructor. Three hours per week. *Four semester hours.*

**POL-346. Japanese Politics/Dr. Hood**

Focus on 20th-century Japanese politics. Examines the major issues, events, institutions and trends of the modern Japanese political experience. Prerequisite: Politics 242. Three hours per week. *Four semester hours.*

**POL-347. Chinese Politics/Dr. Hood**

Focus on the government and politics of 20th-century China. Examines the issues, events, personalities and policy trends of the modern Chinese political experience. Prerequisite: Politics 242. Three hours per week. *Four semester hours.*

**POL-352. Theories of International Relations/Dr. Evans/Dr. Hood**

This course explores the theories that have been used to study international relations from ancient times to the present. Particular attention is given to the roots of contemporary theories, especially realism, neoliberal-

ism, imperialism, neorealism, and international political economy. Prerequisite: Politics 252. Three hours per week. *Four semester hours.*

**POL-353. International Relations of Asia/Dr. Hood**

An examination of the foreign and international policies of the major countries of East Asia. Special emphasis is given to the politics of international trade and economics, war and security issues, and the role of the superpowers in the East Asian region. Prerequisite: Politics 252. Three hours per week. *Four semester hours.*

**POL-355. U.S. Foreign Policy/Dr. Evans**

Works of scholars and statesmen analyze the process and substance of recent foreign policy. Attention is paid to the capabilities of presidents, the influence of Congress and public opinion, and the organization and function of the National Security Council. Prerequisite: Politics 252. Three hours per week. *Four semester hours.*

**POL-356. International Organizations/Dr. Evans**

A study of governmental international organizations with emphases on the functions of the United Nations and the foreign policy of one of its members. Open only to members and alternates selected to Ursinus' National Model UN delegation. Does not satisfy major or minor requirements in politics or international relations. One semester hour.

**POL-357. War and Revolution/Dr. Evans**

Various theories of international conflict will be tested by way of a series of case studies on 20th-century wars and revolutions. The Inter-Nation Simulation will be played using historical or hypothetical conflict to further test theories. Prerequisite: Politics 252. Three hours per week. *Four semester hours.*

**POL-381. Internship in Politics and Government/Staff**

Internship in a public or governmental organization or participation in an overseas study program. A 2.67 grade average and permission of the department are required. *Four semester hours.*

## POLITICS AND INTERNATIONAL RELATIONS

### **POL-399. Topics in Law and Politics/Staff**

An occasional course dealing with special subject areas or events. *Four semester hours.*

### **POL-418W. Seminar in American Government/ Dr. Fitzpatrick**

Intensive study of a special topic in American government emphasizing original research and substantial oral and written work. Prerequisites: English 100, junior or senior status and one 300-level course in American government. Three hours per week. *Four semester hours.*

### **POL-437W. Seminar in Political Philosophy/Dr. Stern**

Intensive study of a special topic in political philosophy emphasizing original research and substantial oral and written work. Prerequisites: English 100, junior or senior status and one 300-level course in political philosophy. Three hours per week. *Four semester hours.*

### **POL-442W. Seminar in Comparative Politics/Dr. Evans/Dr. Hood**

Intensive study of a special topic in compar-

ative politics emphasizing original research and substantial oral and written work.

Prerequisites: English 100, junior or senior status and one 300-level course in comparative politics. Three hours per week. *Four semester hours.*

### **POL-452W. Seminar in International Politics/Dr. Evans/ Dr. Hood**

Intensive study of a special topic in international politics emphasizing original research and substantial oral and written work.

Prerequisites: English 100, junior or senior status and one 300-level course in international politics. Three hours per week. *Four semester hours.*

### **POL-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the departmental chair. *Four semester hours.*

### **POL-492. Research/Independent Work/Staff**

A continuation of Politics 491. Prerequisite: Politics 491. *Four semester hours.*

## INTERNATIONAL RELATIONS

*Professors* Clark, Doughty, Gallagher, Hood (*Chair*) O'Neill; *Associate Professors* King, Oboler; *Assistant Professor* Evans.

International relations majors become capable of living and working in a worldwide setting by developing an understanding of how that setting came to be and how its various political, economic, and social systems function.

### **Requirements for International Relations Majors**

The international relations major is an interdisciplinary program for students interested in careers in international politics and diplomacy, intelligence work, higher education, international law, international trade, journalism, and other fields where expertise in international affairs is necessary. Courses required to complete the international relations major include: Politics 100, 242, 252, 352, EcBA 100, History 207, and a capstone consisting of either Politics 442W, 452W, History 400W, 401W and 442W, or IR 400W (Note: Students planning to do graduate study in political science should take Politics 218 and 237 as well). Majors are additionally required to take four of the following courses, including courses in at least two different departments: Politics 344, 345, 346, 347, 353, 355, 357; History 205,

## POLITICS AND INTERNATIONAL RELATIONS/PSYCHOLOGY

241, 243, 253, 308, 344, 365 and 368; EcBA 251, 252, 308, 309; or Anthro 242, IDS 332. Finally, all students in the IR major must take at least two courses at the 200 level or above in a foreign language. IR majors are strongly encouraged to pursue study-abroad options. The department regularly tries to accommodate students by accepting courses taken abroad in fulfillment of major requirements.

### Requirements for International Relations Minors

The international relations minor consists of Politics 100, 242, 252, 352, and one course from either Politics 344, 345, 346, 347, 353, 355, 357, or History 207.

#### IR-400W. Research in International Relations

This capstone course will require a series of short papers and a major research project.

An oral presentation will be made before an upper-division course on the subject. Three hours per week. *Four semester hours.*

## PSYCHOLOGY

*Professors* Chambliss (*Chair*), Fago, Rideout; *Associate Professors* Richardson, England; *Lecturer* McMahon.

The objectives of the department of psychology for the student are:

- 1.) to familiarize the student with the general methods of behavioral research;
- 2.) to familiarize the student with the various content areas of psychology;
- 3.) to develop an appreciation of the interplay of theory and research in psychology; and 4.) to develop the ability for critical, analytic and independent thinking in the realm of behavioral science.

A student meeting these objectives is prepared not only for graduate work in psychology and the behavioral sciences, but also for study in other areas and professions, as well as employment in a wide variety of industrial, business, and governmental positions. Also attainable for psychology majors at Ursinus is Pennsylvania certification in social studies for grades 7-12, as well as courses which may apply to graduate school programs elsewhere for elementary and secondary school counselors and for school psychologists. Students and their advisers should consult the education department booklet, Ursinus College Teacher Education Programs.

In order to meet these objectives, the psychology curriculum is divided into four components: major core, ancillary courses, major concentration, minors. These are explained individually below.

**A. Major Core**

This is required of all psychology majors. It consists of a basic set of courses required of all majors, and four content areas from each of which the student must select one course.

1. Required: Psychology 100, 110, 210W.
2. Content areas: each student must select one course from each content area.
  - a. Experimental: Psychology 320, 325, 330, 340.
  - b. Developmental/Personality: Psychology 345, 355, 375, 450, 455.
  - c. Social/Applied: Psychology 360, 365, 440, 465.
  - d. Research/Theory: Psychology 481, 482, 491, 492, 495.
3. Six additional elected credits in Psychology.

**B. Ancillary Courses****Required of all majors:**

1. Biology 100Q, 200a or b, or 111Q, 112Q.
2. Eight credit hours in the non-psychology social sciences, choosing among anthropology, economics, politics, sociology and CST 105.

**C. Major Concentration**

This is not required but rather intended for the student who plans to pursue graduate study in psychology or related fields.

1. Math 241, 242.
2. Psychology 481 or 482, 491 or 492 (beyond the course taken as part of the major core).
3. Three electives from departmental offerings at the 300-400 level.
4. CST 201 is highly recommended.

**D. Minor Concentrations**

A minor concentration in general psychology consists of Psychology 100 and 110; one course in experimental psychology chosen from 320, 325, 330 or 340; one course in developmental/personality psychology chosen from 345, 355, 375, 450 or 455; one course in social/applied psychology chosen from 360, 365, 440, or 465.

A minor concentration in human behavioral development consists of Psychology 100, 110, 345, 355, and 455.

## PSYCHOLOGY

A minor concentration in neuroscience consists of Biology 431; Psychology 110, 320 and 325; and either Psychology 481 or 482 (approved topic applicable to the neurosciences), or Biology 481 or 482, 491, or 492 (approved topic applicable to the neurosciences). Psychology 327 is recommended but not required.

### **PSYC-100. Introductory Psychology/ Staff**

This course is an introduction to psychological research and topics selected to illustrate interdisciplinary and cross-cultural perspectives. The goal is to enhance insight into individuals, the internal factors that influence their psychological processes, and their relationship with their social milieu. Four hours per week. *Four semester hours.*

### **PSYC-110. Research and Statistical Methods/Dr. Fago**

This course is an introduction to psychological research, emphasizing non-experimental research methodologies including field studies, correlational research, and quasi-experimental and ex post facto research designs. Topics covered include the following: operationism, measurement and error, subject and variable selections, experimental control, and ethical issues. Students will also be introduced to the use of statistics as a research tool. Three hours lecture, two hours laboratory per week. *Four semester hours.*

### **PSYC-210W. Experimental Design and Statistical Methods/ Dr. Rideout**

This course is designed to familiarize the student with principles of experimental design, statistical techniques, and laboratory methods used in psychology. Lectures, demonstrations, data collection, and the preparation of scientific reports. Prerequisites: English 100, Psychology 100, Psychology 110, or permission of instructor. Three hours lecture, two hours laboratory per week. *Four semester hours.*

### **PSYC-260. Mental Health and Abnormal Psychology/ Dr. Chambliss**

Mental health problems are examined from the biological, behavioral, cognitive, humanistic/existential and sociocultural perspectives. Topics include reactive, anxiety, and personality disorders, psychosis and organic disorders, and substance abuse. Prevention and treatment of mental illness are

discussed. Prerequisite: Psychology 100. Three hours per week. *Four semester hours.*

### **PSYC-265. Educational Psychology/ Staff**

Educational application of psychological concepts will be addressed. The focus is on the psychological processes involved in learning and behavior management in the classroom, but the course includes a survey of cognitive and social development (the same course as Education 265). Prerequisite: Psychology 100. Three hours per week. *Four semester hours.*

### **PSYC/ENV-282. Environmental Psychology/ Dr. Rideout**

Study of the interrelationship between human behavior and experience and the built and natural environment. Topics include: influences of weather, climate, noise, crowding, and stress; personal space and territoriality; work, leisure, and learning environments; the natural environment and behavioral solutions to environmental problems. Prerequisite: PSYC-100. Three hours per week. *Four semester hours.*

### **PSYC-301. Reading in Psychology/ Staff**

Individual study of one or more selected topics in the psychological literature, and preparation of an annotated bibliography of a detailed proposal for subsequent research. To register for this course, the student must have the consent of a member of the psychology staff to serve as adviser. One semester hour.

### **PSYC-302. Reading in Psychology/ Staff**

Content and prerequisites as in Psychology 301, but offered in the spring term. One semester hour.

### **PSYC-320. Sensation and Perception/Dr. Rideout**

The nature of the fundamental sensory processes will be explored with emphasis on vision and audition. Theory and experiments



bearing on significant perceptual phenomena will be surveyed from both physiological and behavioral viewpoints. Prerequisites: Psychology 100, Psychology 110. Three hours of lecture, two hours of laboratory per week. *Four semester hours.*

**PSYC-325. Behavioral Neurosciences/  
Dr. Rideout**

A study of the structure and function of the vertebrate nervous system, particularly of the neural substrates of behavior. Topics include evolutionary, anatomical and physiological approaches to the nervous system and behavior. Some emphasis will be placed on topics in sleep research and in cerebral lateralization of function. Prerequisites: Psychology 100; Biology 100 or 111; or permission of the instructor. Three hours per week. *Four semester hours.*

**PSYC-327. Neurosciences Laboratory/  
Dr. Rideout**

A study of nervous system structure and function emphasizing human electrophysiological signal recording and manipulation. Topics include gross neuroanatomy; electrophysiological signal characteristics, recording and analysis; and biofeedback programming. Prerequisite: Permission of the instructor. Two hours per week. One semester hour.

**PSYC-330. Cognitive Psychology/  
Dr. Fago**

A review of contemporary research and theory dealing with human mental processes. Topics covered include attention, pattern recognition, structure of memory, memory processes, and language acquisition. Prerequisites: Psychology 100 and 210W. Three hours lecture, two hours laboratory per week. *Four semester hours.*

**\*PSYC-340. Learning and Motivation/  
Dr. Fago**

A review of learning theory, past and contemporary. Emphasis will be on the basic processes of classical conditioning and instrumental learning, the phenomena associated with these processes, and the development of learning theory in response to experimentation. Lectures, individual experimentation, and the preparation of scientific reports. Prerequisites: Psychology 100 and 210W. Three hours lecture, two hours laboratory per week. *Four semester hours.*

\*This course is not available in 2000-2001.

**PSYC-345. Child Development/  
Dr. England**

A study of human development from conception through childhood. Physical, cognitive, and social development will be reviewed in terms of psychological theory and empirical research. Emphasis will be given to the interaction between cultural and individual influences on the course of development. Prerequisite: Psychology 100. Three hours per week. *Four semester hours.*

**PSYC-355. Adolescent Psychology/  
Dr. Fago**

A review of research and theory of physical, psychological, and social development during adolescence. Topics covered will include physical/sexual development, cognitive development, personality development, sex roles and gender identity, peer and familial influences, and social development. Prerequisite: Psychology 100. Three hours per week. *Four semester hours.*

**PSYC-360. Psychology in the  
Community/Dr. England**

Application of psychological theory, research methods, and empirical findings to community programs dealing with contemporary social problems, such as crime and delinquency, racial prejudice, environmental pollution, mental illness, drug addiction, poverty, and other forms of deprivation. Prerequisite: Psychology 100. Three hours per week. *Four semester hours.*

**PSYC-365. Organizational  
Psychology/Dr. Richardson**

The study of human behavior in work settings. Motivation and productivity, personnel selection, human-computer interaction, and causes and consequences of job stress. The effects of different approaches to management are addressed. Prerequisites: Psychology 100; Math 241. Three hours per week. *Four semester hours.*

**PSYC-375. Adulthood and Old Age/  
Dr. England**

A survey of physical, social, and cognitive changes in adulthood with a focus on old age. The survey course will review research and theory from the lifespan perspective. Prerequisite: Psychology 100. Three hours per week. *Four semester hours.*

## PSYCHOLOGY

### **PSYC-381. Psychology Internship/ Dr. Chambliss**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact departmental chair for further information. Prerequisites: Junior standing, nine credits in psychology, and approval of a faculty internship adviser. Eight to ten hours per week. *Three semester hours.*

### **PSYC-440. Social Psychology/ Dr. Richardson**

The study of social forces as they originate with and impinge on individuals. Attitude-behavior relationships, group membership, and causes of antisocial and prosocial behavior are analyzed. Historical perspectives are included. Three hours per week. Prerequisites: Psychology 100 and Math 241. Three hours per week. *Four semester hours.*

### **PSYC-450. Psychopathology and Psychotherapy/ Dr. Chambliss**

Clinical and experimental approaches to the understanding and treatment of psychosis, anxiety disorders, and related conditions. Selected topics are studied intensively to illustrate the wide variety of contemporary viewpoints and techniques. Prerequisites: Psychology 100, 260, and 265 or 345. Three hours per week. *Four semester hours.*

**PSYC-455. Personality/Dr. Chambliss**  
A comprehensive survey of psychological theory and research dealing with the normal aspects of human nature. The psychoanalytic, biogenetic, trait, humanistic, and behavioral perspectives will be explored. Prerequisites: Psychology 100, 260, and 265, 355 or 345. Three hours per week. *Four semester hours.*

### **\*PSYC-465. Testing and Assessment/ Dr. Richardson**

Introduction to procedures and instruments related to the assessment of individuals and outcomes in educational and institutional settings. The course will review issues related to program evaluation as well as the development and use of aptitude, achievement, and personality tests. Prerequisites: Psychology 100 and Math 241. Three hours per week. *Four semester hours.*

\*This course is not available in 2000-2001.

### **PSYC-480. History and Theories of Psychology/Dr. Fago**

The philosophical underpinnings of psychology from the Greeks to the 19th-century empiricists will be explored. The development of scientific paradigms to address fundamental philosophical issues will then be traced in the emergence of contemporary psychology. A critique of psychology as a method of inquiry and as a theory of knowledge will be attempted within the framework of a philosophy and sociology of science. Three semester hours per week. *Four semester hours.*

### **PSYC-481. Research/Staff**

Investigations of an experimental, clinical or theoretical nature pursued independently by the student. The preparation of a written and oral scientific report is required. To register for the course, a student must have the consent of a member of the psychology staff to serve as his or her adviser. Prerequisite: CST-201 or permission of instructor. *Four semester hours.*

### **PSYC-482. Research/Staff**

Content as in Psychology 481, but offered in the spring term. Students who have been admitted to the course and who have fulfilled its requirements may be awarded departmental honors, but no additional semester hours of credit, if they have qualified in other ways for admission to the honors program. Prerequisite: CST-201 or permission of instructor. *Four semester hours.*

### **PSYC-491. Research/Independent Work/Staff**

This course is open to candidates for departmental honors and to other students with the permission of the departmental chairperson. The preparation of a written and oral scientific report is required. Prerequisite: CST-201 or permission of instructor. *Four semester hours.*

### **PSYC-492. Research/Independent Work/Staff**

A continuation of Psychology 491. Prerequisite: Psychology 491. *Four semester hours.*

### **PSYC-495. Seminar in Psychology/Staff**

A seminar intended to familiarize the student with the current trends and special topics in theoretical and applied psycholo-

gy. Emphasis will be given to the preparation and oral presentation of papers on selected topics which will vary from year to year. Open to third- and fourth-year students

majoring in psychology. Prerequisite: CST-201. Three hours per week. *Four semester hours.*

**WOMEN'S STUDIES**

*Professors Borsdorf (Advisory Council), Czubaroff, Hall, Hemphill, Lionarons, Novack; Associate Professors Dole, England, Gross, Oboler (Advisory Council Chair); Assistant Professor Potter-Hennessey (Advisory Council).*

Women's Studies is an interdisciplinary minor which places the study of women and women's experience at the center of the curriculum. It is designed to examine women's experience in and contributions to the world from a cross-cultural perspective, as well as to explore the challenges and limitations placed on women today.

**Requirements for Minors**

A minor concentration in Women's Studies consists of 16 credits. All students must take WMS-200 Women's Studies. The remaining credits must come from the following: ANTH-225, EDU-402, ENG-228, ESS-301, HIST-328, HIST-366, SOC-227, SOC-263, WMS-381, or WMS-382. (Credit for only one internship, either WMS-381 or WMS-382, counts toward the minor.)

Seminars, special topics courses, and up to four credits of independent study projects above the 100 level which deal with Women's Studies may be substituted for the courses listed above with the approval of the course instructor and the coordinator of Women's Studies.

**WMS-200. Women's Studies**

An interdisciplinary course to promote an awareness and understanding of women's and men's potential and options in our society. Readings and discussion in history, gender and gender roles, women and society, women's place in the working world, in legal and religious institutions. Open to upperclass students. Four hours per week. *Four semester hours.*

**WMS-370. Research - Independent Study/Staff**

Directed readings and research on a topic in Women's Studies. A student wishing to register for this course must present to a member of the faculty a proposal outlining research to be completed, and submit the instructor's written agreement to supervise the project to the chair of the WMS Advisory Council. Prerequisites: WMS 200 and status as a WMS minor. *Four semester hours.*

**WMS-381. Women's Studies Internship**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the Women's Studies Advisory Committee Chair for further details. Prerequisites: Junior standing, WMS 200, and approval of a faculty internship adviser. One hundred and twenty (120) hours. *Three semester hours.*

**WMS-382. Women's Studies Internship**

An off-campus academic/work experience under the supervision of an internship adviser and an on-site supervisor. Contact the Women's Studies Advisory Committee Chair for further details. Prerequisites: Junior standing, WMS 200, and approval of a faculty internship adviser. One hundred and sixty (160) hours. *Four semester hours*

# Directory

<b>BOARD OF TRUSTEES</b>	<i>First elected</i>	<i>Term expires</i>
<b>Wilbert D. Abele, B.A.</b> President and CEO Henry Troemner, LLC Thorofare, N.J.	1992	2002
<b>James L. Baer, B.A., LL.B.</b> Partner Lerch, Early & Brewer Chartered Bethesda, Md.	1991	2001
<b>Phillip S. Brackin, M.D.</b> Radiologist Lower Bucks Hospital Langhorne, Pa.	1999	2004
<b>Robert L. Brant Jr., B.A., J.D.</b> Partner, Keenan, Ciccitto & Brant Collegeville, PA	1996	2001
<b>James W. Bright Jr., B.A., B.Div., S.T.M., D.Min.,</b> Pastor Emeritus St. Paul United Church of Christ Manheim, Pa.	1988	2003
<b>William H. Bromley, B.A., M.B.A.</b> Managing Partner Springbrook Partners, L.P. Bala Cynwyd, PA	2000	2004
<b>David A. Cornish, A.A.</b> Chairman & CEO (Retired) Collegeville Flag & Mfg. Company Collegeville, Pa.	1986	2001
<b>John E. F. Corson, B.A.</b> President Corson Investment Company Plymouth Meeting, Pa.	1983	2003
<b>William O. Daggett Jr., B.A.</b> President and Owner Kistler-tiffany Benefits Wayne, Pa	2000	2004
<b>Betty Brown Dando, B.S.</b> School administrator (Retired) Glenside, Pa.	1989	2004
<b>Llewellyn F. Dryfoos Jr., B.A.</b> President Dryfoos Insurance Agency, Inc. Hazleton, Pa.	1988	2003

DIRECTORY

<b>Cynthia A. Fisher, B.S., M.B.A.</b> President ViaCord, Inc. Boston, Mass.	1996	2001
<b>Spencer Foreman, B.S., M.D.</b> President Montefiore Medical Center Bronx, N.Y.	1995	2004
<b>Andrew D. Freed, B.S., M.B.A.</b> President and CEO UTI Corporation Trappe, Pa.	2000	2004
<b>Thomas P. Glassmoyer, B.A., LL.B., LL.D.</b> <b>Of Counsel</b> <b>Schnader, Harrison, Segal &amp; Lewis</b> Willow Grove, Pa.	1956	2002
<b>Carol K. Haas, B.S., Ph.D., Sc.D.</b> Research Manager E.I. DuPont Wilmington, Del.	1987	2002
<b>Jerrold B. Harris, B.S.</b> President and CEO (Retired) WWR Scientific Products Church Creek, Md.	2000	2004
<b>Robert F. Hartman, B.A.</b> Partner (Retired) R.J. Carroll Co., Inc. Frederick, Md.	1986	2001
<b>Jerry L. Johnson, B.S., M.S.</b> Executive vice President Safeguard Scientifics, Inc. Devon, Pa.	1997	2002
<b>Ruth Kurisu, B.S.</b> Small Business Consultant. Laguna Niguel, Calif.	1998	2003
<b>Paul E. Lesier, B.S.</b> Vice President Avalon Real Estate Agency Avalon, N.J.	1995	2004
<b>Marilyn S. Lewis, H.L.D.</b> Community Volunteer Lederach, Pa.	1995	2004
<b>Michael J. Lewis, B.S., M.S., Ph.D.</b> Professor & Chairman of Psychology Temple University Philadelphia, Pa.	1991	2001

## URSINUS COLLEGE CATALOG

<p><b>J. Robert Lovett, B.S., M.S., Ph.D.</b>                      Executive Vice President (Retired)                      Air Products &amp; Chemicals                      Allentown, Pa.</p>	1997	2002
<p><b>Betty Umstad Musser, B.A., L.H.D.</b>                      Community Volunteer                      Wayne, Pa.</p>	1982	2002
<p><b>Dr. Albert M. Paolone,</b>                      B.S., M.S., Ed.D., FACSM                      Professor of Exercise and Environmental Physiology                      Temple University (Retired)                      Voorhees, N.J.</p>	1996	2001
<p><b>Henry W. Pfeiffer, B.S., M.S.</b>                      Senior Sales Representative                      Xp(dX)                      Chatham, N.J.</p>	1978	2003
<p><b>Robert A. Reichley, B.A., LL.D.</b>                      President, Ursinus Board of Directors                      Executive Vice President                      and Secretary (emeritus)                      Brown University                      Providence, R.I.</p>	1987	2004
<p><b>Richard P. Richter,</b>                      B.A., M.A., LL.D., L.H.D.                      President Emeritus                      Ursinus College                      Collegeville, Pa.</p>	1976	2001
<p><b>Mitchel Sayare, B.S., Ph.D., DSc.</b>                      Chairman and CEO                      ImmunoGen, Inc.                      Norwood, Mass.</p>	1995	2004
<p><b>Harold C. Smith, B.A., M.B.A., M.Div., D.D.</b>                      President                      The Young Men's Christian Association                      Retirement Fund                      New York, N.Y.</p>	1994	1999
<p><b>Jan M. Smith, B.A.</b>                      Senior Regional Manager                      Summit Bank                      Fort Washington, Pa.</p>	1988	2001
<p><b>Donald G. Stauffer, B.A.</b>                      Vice President (Retired)                      Drake Beam Morin, Inc.                      Berwyn, Pa.</p>	1988	2003
<p><b>Marilyn L. Steinbright, B.S., LL.D.</b>                      President                      Arcadia Foundation                      Norristown, Pa.</p>	1975	2000

DIRECTORY

**Edward J. Stemmler,** 1992 2002  
 B.A., M.D., Sc.D., L.H.D.  
 Dean Emeritus,  
 University of Pennsylvania  
 School of Medicine  
 Roseland, Va.

**William G. Warden, B.A.** 1982 2002  
 Chairman  
 Cawsl Corporation  
 Radnor, Pa.

**Gregory R. Wenhold, B.A., M.Div.** 1993 2003  
 Pastor  
 Good Shepherd Lutheran Church  
 Naperville, Ill.

**BOARD OF TRUSTEES EMERITI** *First elected*

**Joan D. Aikens, B.A., LL.D.** 2000  
 Managing Director  
 Public Affairs Management, Inc.  
 Washington, D.C.

**Peter Havens, B.A., M.B.A.** 2000  
 Chairman  
 Baldwin Investment, LLC  
 West Conshohocken, Pa.

**William F. Heefner, B.A., LL.B., LL.D** 2000  
 Of Counsel  
 Curtin and Heefner  
 Perkasi, Pa.

**Donald E. Parlec, B.S., M.D.** 2000  
 Parlec & Tatem Radiologic Associates  
 Doylestown, Pa.

**Robert Poole, B.S., M.D.** 2000  
 Physician (Retired)  
 West Chester, Pa.

**BOARD OF TRUSTEES EX-OFFICIO**

**John Strassburger, M.A., M.A., Ph.D.** 2000  
 President Ursinus College  
 Collegeville, Pa.

**BOARD OF TRUSTEES LIFE MEMBERS**

**James H. Baird, B.S., M.S., Sc.D.** 1979  
 Chadds Ford, Pa.

**Thomas J. Beddow, B.A., J.D., LL.D.** 1958  
 Hobe Sound, Fla.

## URSINUS COLLEGE CATALOG

<b>James G. Crouse, B.S., M.S.</b> Limerick, Pa.	1980
<b>Paul Doughty, B.A., Ph.D.</b> Gainesville, Fla.	1997
<b>David J. Knauer, B.A.</b> West Chester, Pa.	1997
<b>Henry P. Laughlin, M.D., Sc.D., Sc.S.D., B.S.</b> Adamstown, Md.	1967
<b>Sheldon E. Mackey, B.A., B.D., D.D., LL.D.</b> Blandon, Pa.	1960
<b>Geoffrey Marshall, B.A., M.A., Ph.D.</b> Cranberry, N.J.	1998
<b>Gladys C. Pearlstine, B.A.</b> Haverford, Pa.	1997
<b>Carl A. Posse</b> Key Largo, Fla.	1979
<b>J. Permar Richards Jr., L.H.D.</b> Bryn Mawr, Pa.	1997
<b>Jack W. Robbins, B.A., LL.B.</b> Jenkintown, Pa.	1984
<b>E. Eugene Shelley, B.S., LL.B., LL.D.</b> York, Pa.	1971
<b>John C. Shetler, A.B., B.D., Th.M., D.D.</b> Trappe, Pa.	1976
<b>Albert E. Teske, B.A., B.D., D.D.</b> Macungie, Pa.	1997

## COMMITTEES OF THE BOARD OF TRUSTEES

**Academic Affairs:** Michael Lewis, CHAIR,  
Aikens, Baer, fisher, Haas, Heefner, Reichley, Richter, Sayare, Stemmler, Strassburger

**Art Museum Advisory:** Pfeiffer, CHAIR,  
Brackin, Brant, Dando, Marilyn Lewis, Musser, Reichley, Richter, Harold Smith, Strassburger

**Athletics:** Stauffer, CHAIR,  
Cornish, Dando, Marilyn Lewis, Paolone, Poole, Reichley, Strassburger, Wenhold

**Audit:** Brant, CHAIR  
Cornish, Corson, Havens, Jan Smith

**Buildings and Grounds:** Cornish, CHAIR,  
Hartman, Leiser, Lovett, Poole, Reichley, Strassburger, Taylor

**Development:** Abele, CHAIR,  
Aikens, Baer, Brackin, Brant, Corson, Dando, Dryfoos, Foreman, Heefner, Kurisu, Leiser, Paolone,  
Parlee, Pfeiffer, Reichley, Stemmler, Strassburger, Wenhold



**Executive:** (Officers of the Corporation) Reichley (CHAIR), Pfeiffer, Corson, Steinbright; Cornish, Haas, Heefner, Kurisu, Marilyn Lewis, Michael Lewis, Lovett, Sayare, Strassburger

**Finance and Budget:** Corson, CHAIR, Abele, Aikens, Fisher, Foreman, Havens, Heefner, Johnson, Reichley, Sayare, Harold Smith, Jan Smith, Strassburger, Warden

**Honorary Degrees:** Stemmler, CHAIR, Glassmoyer, Hartman, Michael Lewis, Reichley, Strassburger

**Investment:** Warden, CHAIR Abele, Corson, Foreman, Glassmoyer, Havens, Heefner, Johnson, Lovett, Parlee, Reichley, Harold Smith, Jan Smith, Strassburger

**Library and Information Technology:** Bright, CHAIR, Haas, Johnson, Marilyn Lewis, Reichley, Richter, Steinbright, Strassburger, Taylor

**Marketing and Enrollment Management:** Haas, CHAIR, Corson, Dryfoos, Fisher, Havens, Kurisu, Michael Lewis, Paolone, Pfeiffer, Reichley, Stauffer, Strassburger

**Student Life:** Musser/Wenhold, CHAIRS, Brackin, Brant, Bright, Leiser, Marilyn Lewis, Reichley, Strassburger, Taylor

**Committee on Trusteeship:** Poole, CHAIR, Baer, Foreman, Heefner, Lovett, Parlee, Reichley, Stauffer, Stemmler, Strassburger

*Dr. Reichley is appointed ex officio with voice and vote on all committees. President Strassburger is appointed ex officio with voice and vote on all committees except Audit.*

## OFFICERS OF THE CORPORATION

**Chair:** Robert L. Reichley

**Vice Chair:** Henry W. Pfeiffer

**Secretary:** Marilyn L. Steinbright

**Treasurer:** John E.F. Corson

## URSINUS COLLEGE CATALOG

### THE ADMINISTRATION 1999-2000

John Strassburger, Ph.D., President

#### SENIOR ADMINISTRATIVE OFFICERS

Judith T. Levy, Ph.D., *Vice President for Academic Affairs and Dean of the College*

Richard DiFelicianantonio, M.A., *Vice President for Enrollment*

Winfield L. Guilmette, M.A., C.P.A., *Vice President for Finance and Planning*

Hudson B. Scattergood, M.B.A., *Vice President for College Relations*

#### ADMINISTRATIVE STAFF - 1999-2000

William E. Akin, Ph.D., *Director of Athletics*

Blanche Z. Allen, B.B.A., *Publications Coordinator*

Lisa Barrickman, M.S., *Resident Director*

Jane Barth, M.A., *Environmental Health & Safety Coordinator*

Tracey A. Berton, M.B.A., *Associate Director, Student Financial Services*

Joy Biscornet, B.S., *Admissions Counselor*

C. Richard Bogdan, *Network Systems Administrator*

Barbara Boris, B.S., *Registrar*

Erin Burk, B.A., *Assistant Director of Alumni Affairs*

Joseph Cataldi, B.S., *Assistant Controller*

Mona Chylack, A.B., *Assistant Director, Student Financial Services*

James Cooper, M.B.A., *Controller*

Paul Cramer, B.A., *Director, Admissions*

Pamela M. Dancu, B.A., J.D., *Director of Major Gifts*

Sarah David, M.Ed., *Internship Coordinator*

Betty Davidson, B.B.A., *Student Accounts Administrator*

Mary Ellen Dewane, B.A., *Director of Alumni Affairs*

Anna Dyess, B.A., *Resident Director*

Naney Fago, B.S., *Assistant Director, Berman Museum of Art*

Jenneen Flamer, B.A., *Senior Associate Director of Admissions/Office Manager*

Wendy Greenberg, B.S., *Editor, College Communications*

Lisa Tremper Hanover, M.A., *The Muriel M. Berman Director, Berman Museum of Art*

Susan Helfand, M.B.A., *Programmer Analyst*

Pia Houseal-Allport, B.A., *Admissions Counselor*

Charles Jamison, M.L.S., *Director of Myrin Library*

Erin Killeen, M.B.A., *Admissions Counselor*

John King, Ph.D., *Director Of Computing Services*

Frederick L. Klee, B.S., *Director of Systems/Management Services*

Jennifer Kopp, B.A., *Resident Director/International Student Advisor*

Jan Lawrence Lange, M.S.A., *Associate Dean of The College And Dean Of Continuing Education*

Jan Levensgood, B.S., *Administrator for Evening Advising and Support, Center for Continuous Learning*

Joshua E. Liss, B.A., *Director of Annual Giving*

Annette V. Lucas, Ph.D., *Associate Dean of The College*

Todd P. McKinney, M.S., *Assistant Dean of Students, Leadership Development, Student Activities, Security*

Stephanie A. McJully, M.Ed., *Assistant Dean of Students/Director of Residence Life*

Nicole S. Minardi, B.A., *Director of Special Gifts*

Ellen Mueller, B.A., *Assistant Director of Annual Giving*

Tracy Nelson, B.A., *Programmer/Analyst*

Deborah Nolan, M.A., *Associate Dean of the College/Dean Of Students*

Eric Ordway, A.A.S., *User Support Specialist*

Phyllis Osisek, M.A., A.A.M.F.T., *Counselor, Wellness and Counseling Services*

- Paulette Patton, B.S., *Director, Multicultural Services and Tutorial Programs*  
 Sonja Pettingill, M.S., *Assistant Director, Center for Continuous Learning*  
 Patricia A. Phillips, B.A., B.S., *Database Manager for College Relations*  
 Carrie Reilly, M.Ed., *Assistant Sports Information Director*  
 The Rev. Charles Rice, M.Div., *Chaplain*  
 Carla M. Rinde, M.S.Ed., *Director of Career Services*  
 Kenneth L. Schaefer, B.A., *Director of Foundation and Corporate Relations*  
 Michelle Sims, M. Ed., *Coordinator, International Learning Center/Instructional  
 Technology Specialist*  
 James Shuttlesworth, B.A., *Network Administrator*  
 Mary Smith, B.B.A., *Accountant*  
 Susan Smith, B.S., *Programmer Analyst*  
 Suzanne Sparrow, B.A., *Director, Student Financial Services*  
 Ruth Sprague, B.A., *User Support Specialist*  
 William J. Stiles, M.Ed., *Sports Information Director*  
 Brian Thomas, B.S., *Sports Manager*  
 Sue Thomas, B.A., *Associate Director of Admissions*  
 Joseph Trump, B.B.A., *Microcomputer Support Specialist*  
 Brian Walter, B.A., *Admissions Counselor*  
 Sally H. Widman, B.A., *Director of College Communications*  
 Kelley Williams, B.S., *Assistant Director of Personnel*

## THE FACULTY 1999-2000

### *President of the College*

**JOHN STRASSBURGER, Ph.D.**

B.A., Bates College; M.A., Cambridge University; Ph.D., Princeton University.

### *Emeriti*

**Donald Gay Baker, Ph.D., Professor of Greek, Emeritus**

B.A., Haverford College; M.A., Ph.D., Harvard University.

**Jane Ann Barth, M.A., Professor Of Chemistry, Emerita**

B.A., Mount Holyoke College; M.A., Smith College.

**Nicholas O. Berry, Ph.D., Professor of Politics, Emeritus**

B.A., Bethany College, M.A., Ph.D., University of Pittsburgh.

**Richard Stuart Bremiller, M.A., Professor of Mathematics, Emeritus**

B.S., United States Merchant Marine Academy; M.S., Drexel University; M.A.,  
 University Of Delaware.

**Adele Pack Boyd, M.Ed., Professor of Exercise and Sport Science, Emerita**

B.S., Ursinus College; M.Ed., Temple University.

**James Pressley Craft, Ph.D., Professor of Political Science, Emeritus**

B.S., U.S. Naval Academy; M.S., Massachusetts Institute of Technology; Ph.D., University of  
 Pennsylvania.

**Alfred L. Creager, B.D., D.D., Professor of Religion, Emeritus**

B.S., Ursinus College; B.D., Lancaster Theological Seminary; D.D., Ursinus College.

**James Douglas Davis, M.A., Professor of History, Emeritus**

B.A., Ursinus College; M.A., University of Pennsylvania.

*died*

*Secretary*

## URSINUS COLLEGE CATALOG

**Vonnie Gros, M.A., Associate Professor of Exercise And Sport Science, Emerita**  
B.A., Ursinus College.

**Raymond Victor Gurzynski, M.Ed., Professor of Health and Physical Education, Emeritus**  
B.A., Ursinus College; M.Ed., Temple University.

**Ruth Rothenberger Harris, M.A., LL.D., Dean of Student Life, Emerita**  
B.S., Ursinus College; M.A., Columbia University; LL.D., Ursinus College.

*Henry Joyce*  
**Conrad Edward Kruse, D.Sc., Professor of Biology, Emeritus**  
B.Sc., D. Sc., Philadelphia College of Pharmacy and Science; M. Sc., University Of Wisconsin.

**William J. Middleton, Ph.D., Adjunct Professor of Chemistry, Emeritus**  
B.S And M.S., North Texas State University; Ph.D., University of Illinois.

**Eugene Herbert Miller, Ph.D., LL.D., Professor of Political Science, Emeritus**  
B.A., Ursinus College; M.A., Ph.D., Clark University; LL.D., Ursinus College.

**Albert Lester Reiner, Ph.D., Professor of Romance Languages, Emeritus**  
A.B., M.A., Ph.D., Harvard University.

**Richard Paul Richter, M.A., LL.D., President, Emeritus**  
B.A., Ursinus College; M.A., University of Pennsylvania; LL.D., Ursinus College.

**Blanche Beatrice Schultz, M.S., Professor of Mathematics, Emerita**  
B.S., Ursinus College; M.S., University of Michigan.

**Faye French Shaw, M.S., Associate Professor of Chemistry, Emerita**  
B.A., University Of California; M.S., West Chester State College.

**Jane Perreten Shinchouse, P.T., Professor of Biology , Emerita**  
B.S., Ursinus College; P.T., University of Pennsylvania.

**Evan Samuel Snyder, Ph.D., Professor of Physics, Emeritus**  
B.S., Ursinus College; M.S., Ph.D., University of Pennsylvania.

**Margaret Brown Staiger, B.A., Reference and Acquisitions Librarian, Emerita**  
B.A., Ursinus College.

**Roger Powell Staiger, Ph.D., Professor of Chemistry, Emeritus**  
B.S., Ursinus College; M.S., Ph.D., University Of Pennsylvania.

**Levie Van Dam, Ph.D., Professor of Biology, Emeritus**  
B.S., M.S., Ph.D., Groningen State University, The Netherlands.

**Derk Visser, Ph.D., Professor of History, Emeritus**  
M.A., University of Pennsylvania; Ph.D., Bryn Mawr College.

**Richard Jacob Whatley, M.S., Professor of Health, Physical Education and Recreation, Emeritus**  
B.S., University Of Maine; M.S., Springfield College.

**William Bedford Williamson, Ed.D., D.D., Professor of Philosophy, Emeritus**  
B.S., S.T.B., Ed.D., Temple University; S.T.M., Lutheran Theological Seminary; M.A., Lehigh University; D.D., National University.

**Frederick Donald Zucker, Ph.D., Professor of Political Science, Emeritus**  
B.A., Rutgers University; M.A., Ph.D., Pennsylvania State University; M.A., Bryn Mawr College.

**TEACHING FACULTY 1999-2000**

- Jane Agostinelli, M.A., Lecturer in English (1988)**  
 B.S., Carnegie Mellon University; M.A., Villanova University.
- William Ernest Akin, Ph.D., Professor of History (1979) and Director of Athletics**  
 B.A. and M.A., University of Maryland; Ph.D., University of Rochester.
- Daniel Aldridge III, J.D., Ph.D., Assistant Professor of History (1998)**  
 B.A., Michigan State University; J.D., Northwestern University Law School, Ph.D., Emory University.
- Albert Curtis Allen, Jr., Ph.D., Professor of Biology (1970)**  
 B.A., College of Wooster; M.A., Ph.D., University of Michigan.
- Beth A. Bailey, Ph.D., Assistant Professor of Biology (1997)**  
 B.S., Pennsylvania State University; Ph.D., Temple University School of Medicine.
- Sheryl Baratz-Goodman, Ph.D., Assistant Professor (Visiting) of Communication Studies and Theatre (1997) Assistant to the Dean**  
 B.A., Georgetown University; M.A., Ph.D., Temple University.
- Nancy L. Bates, M.A., Lecturer in English (1993)**  
 B.A., West Chester University; M.A., West Chester University.
- James R. Beuerle, Ph.D., Assistant Professor (Visiting) of Mathematics (1999)**  
 B.S., M.A., Ph.D., State University of New York at Binghamton.
- Cindy L. Biel, M.S., Lecturer in Modern Languages (1999)**  
 B.A., West Chester University; M.A., University of Pennsylvania
- Laura Borsdorf, Ph.D., Professor of Exercise and Sport Science (1986)**  
 B.S., Kansas State University; M.S., Kansas State University; Ph.D., Arizona State University.
- Barry N. Bowers, M.B.A., C.P.A., Associate Professor of Economics and Business Administration (1979)**  
 B.S., Bloomsburg State College; M.B.A., Temple University; C.P.A., Commonwealth of Pennsylvania.
- Christopher Bowers, M.A., Lecturer in English (1999)**  
 B.A., Ursinus College; M.A., Temple University
- Keith Brand, M. Ed., Lecturer in Communications Studies and Theatre (1998)**  
 B.E.A., West Virginia University; M. Ed., Temple University
- Frieda Brinkman, Ph.D., Visiting Assistant Professor (1992)**  
 B.A., Eastern College; M.A., Villanova University; Ph.D., Temple University
- Douglas McD. Cameron, Ph.D., Associate Professor of Spanish (1987)**  
 B.A., Harvard College; C. Phil., University of California, San Diego; Ph.D., University of California, San Diego.
- Kathy Caruso, M.S., Lecturer in Psychology (1998)**  
 B.A., Ursinus College; M.S. Chestnut Hill College.
- Christopher Cellucci, Ph.D., Assistant Professor (Visiting) of Physics (1998)**  
 B.S., St. Joseph's University; M.A., Ph.D., Bryn Mawr College.
- Catherine Anne Chambliss, Ph.D., Professor of Psychology (1979)**  
 B.A., Yale University; M.S. and Ph.D., University of Miami.
- Pamela Sue Chlad, M.S., Associate Professor of Exercise and Sport Science, Head Athletic Trainer (1976)**  
 B.S.N., Widener College; R.N., A.T.C., M.S., Temple University.

## URSINUS COLLEGE CATALOG

- Carol Cirka, M.B.A.**, *Assistant Professor of Economics and Business Administration (2000)*  
B.A., Pennsylvania State University; M.B.A., University of Pittsburgh
- Hugh R. Clark, Ph.D.**, *Professor of History (1982)*  
B.A., M.A., Ph.D., University of Pennsylvania.
- Marcia Clouser, Ph.D.**, *Lecturer in English (1997)*  
B.A. University of Kansas; Ph.D., University of Texas at Austin
- Robin A. Clouser, Ph.D.**, *Professor of German (1974)*  
B.A., Ursinus College; A.M., University of Pennsylvania; Ph.D., University of Kansas.
- Roger D. Coleman, Ph.D.**, *Professor of Mathematics (1979)*  
B.A. and Ph.D., Johns Hopkins University.
- Jeanine Kallander Czubaroff, Ph.D.**, *Professor of Communication Studies and Theatre (1981)*  
B.A., Tufts University; M.A., Boston University; Ph.D., Temple University.
- Mirela Damian-Iordache, M.S.**, *Assistant Professor of Math and Computer Science (2000)*  
M.S., Polytechnic University of Bucharest; M.S., University of Iowa
- Norman David, D.M.A.**, *Assistant Professor of Music (1996)*  
B.A., McGill University; M.M., New England Conservatory of Music; D.M.A., Temple University
- Robert Rand Davidson, Ed.D.**, *Professor of Exercise and Sport Science (1972)*  
B.S., Northeastern University; M.S., Springfield College; Ed.D., Temple University.
- Ellen M. Dawley, Ph.D.**, *Associate Professor of Biology (1989)*  
Brownback-Wagner Chair in Health Sciences  
B.S., Mercy College of Detroit; M.S., University of Michigan; Ph.D., University of Connecticut.
- Robert M. Dawley, Ph.D.**, *Associate Professor of Biology (1989)*  
B.S., B.A., M.S., Wayne State University; Ph.D., University of Connecticut.
- Juan-Ramon De Arana, Ph.D.**, *Assistant Professor of Modern Languages (1997)*  
B.A., Universidad Autonoma de Madrid; Ph.D., Washington University.
- Louis Aubrey Decatur, Ph.D.**, *Professor of English (1970)*  
A.B., M.A., Ph.D., University of Maryland.
- Carol M. Dole, Ph.D.**, *Associate Professor of English (1988)*  
B.A., Manhattanville College; M.A., Louisiana State University; Ph.D., Cornell University.
- Stewart Ross Doughty, Ph.D.**, *Professor of History (1975)*  
B.A., Ursinus College; M.A., Ph.D., Harvard University.
- Andrew J. Economopoulos, Ph.D.**, *Associate Professor of Economics (1988)*  
B.A., SUNY at Fredonia; M.A., Ph.D., Virginia Polytechnic Institute and State University.
- Deborah S. Economopoulos, M.A.**, *Lecturer in Economics and Business Administration (1998)*  
B.A., M.A., A.B.D., Virginia Polytechnic Institute and State University.
- Lynne Y. Edwards, Ph.D.**, *Assistant Professor of Communications Studies and Theatre (1997)*  
B.A., Ursinus College; M.A., Ph.D., University of Pennsylvania.
- Eileen M. England, Ph.D.**, *Associate Professor of Psychology (1989)*  
B.A., Florida State University; M.S., Villanova; Ph.D., Lehigh University.
- Delwyn C. Engstrom, Ph.D.**, *Associate Professor of Exercise and Sport Science (1993)*  
B.A., M.A., California State University, Fresno; D.Ed., University of Northern Colorado.
- Rebecca Susan Evans, Ph.D.**, *Assistant Professor (Visiting) of Politics (1999)*  
B.A., M.A., Purdue University; Ph.D., Harvard University.

- George C. Fago, Ph.D., Professor of Psychology (1970)**  
 A.B., Franklin & Marshall College; M.S., Ph.D., University of Pittsburgh.
- Mary Blair Fields, Ph.D., Professor of Biology (1975)**  
 B.A., Otterbein College; M.S., Ph.D., Miami University.
- Gerard Joseph Fitzpatrick, Ph.D., Professor of Politics (1983)**  
 B.A., Bloomsburg State College; M.A., Ph.D., University of Virginia.
- Marsha Florio, M.S., Instructor in Education (1996)**  
 B.S., Pennsylvania State University; M.S.Ed., University of Pennsylvania.
- Roger Florka, Ph.D., Assistant Professor of Philosophy and Religion (2000)**  
 B.A., University of California, Berkeley; Ph.D., UCLA
- John Henry French, D.M.A., Professor of Music (1979)**  
 William F Heefner Chair of Music  
 B.M., Philadelphia College of the Performing Arts; M.M., Westminster Choir College;  
 D.M.A., University of Cincinnati.
- Judith Emma Fryer, M.S., Associate Professor and Reference Librarian (1969)**  
 B.A., Ursinus College; M.S., Drexel Institute of Technology.
- Holly C. Gaede, Ph.D., Associate Professor of Chemistry (1995)**  
 B.S., University of Delaware; Ph.D., University of California, Berkeley.
- Thomas Edward Gallagher, Ph.D., Professor of Anthropology and Sociology (1977)**  
 B.A., University of Delaware; M.A., Ph.D., Temple University.
- Stacy M. Gayman, Ph.D., Lecturer in French (1996)**  
 B.A., Long Island University; M.A., Université of Avignon, France; M.A., Ph.D., University of Pennsylvania
- Edward Güldea, M.A., Lecturer in Philosophy and Religion (1998)**  
 B.A., Ursinus College; M.A., Villanova University
- Kathryn A. Goddard-Doms, Ph.D., Associate Professor of Biology (1992)**  
 B.S., Gettysburg College; M.S., Bucknell University; Ph.D., University of Connecticut.
- Stewart C. Goetz, Ph.D., Associate Professor of Philosophy (1988)**  
 B.S., Michigan State; M. Litt., Oxford University; Ph.D., University of Notre Dame.
- Marcia Goldberg, M.S., Lecturer in Communication Studies and Theatre (1991)**  
 B.A., Pennsylvania State University; M.S., Marywood College.
- Patricia A. Gross, Ed.D., Associate Professor of Education (1991)**  
 B.A., Marymount College; M.A.T., Fordham University; P.D., St. John's University;  
 Ed.D., Columbia University.
- Paul Guenther, M.A., Lecturer in Exercise and Sport Science (1997)**  
 B.A., Ursinus College; M.A. Western Maryland College.
- Nancy Lineken Haglegans, Ph.D., Professor of Mathematics and Computer Science (1978)**  
 Beardwood Chair of Mathematics  
 A.B., Goucher College; M.A., Ph.D., Johns Hopkins University; M.S., Villanova University.
- Lisa Tremper Hanover, M.A., Adjunct Professor of Fine Arts (1987)**  
 Muriel M. Berman Director of the Berman Museum of Art  
 B.A., University of Richmond; M.A., University of Southern California.
- Melissa Hardin, Ph.D., Lecturer in Spanish and Study Abroad Coordinator (1996-1997)**  
 A.B., University of Missouri-Columbia; M.A., Middlebury College; Ph.D., Washington University in St. Louis.

## URSINUS COLLEGE CATALOG

- Keith Jordan Hardman, Ph.D.**, *Professor of Philosophy and Religion (1967)*  
B.A., Haverford College; B.D., Princeton Theological Seminary; M.A., Columbia University;  
Ph.D., University of Pennsylvania.
- Cindy K. Harris, M.B.A., C.P.A.**, *Associate Professor of Economics and Business Administration (1984)* B.A., M.B.A., University of Pennsylvania; C.P.A., Commonwealth of Pennsylvania.
- Christina Dallett Hemphill, Ph.D.**, *Professor of History (1988)*  
A.B., Princeton University; M.A., Ph.D., Brandeis University.
- Joyce Elizabeth Henry, Ph.D.**, *Professor of English and Communication Studies & Theatre (1972)* B.A., University of Michigan; M.A., Ph.D., University of Wisconsin.
- Ronald Eugene Hess, Ph.D.**, *Professor of Chemistry (1966)*  
B.S., Lock Haven State College; Ph.D., Cornell University.
- Steven Hood, Ph.D.**, *Professor of Politics (1987)*  
B.A., M.A., Brigham Young University; Ph.D., University of California, Santa Barbara.
- Jennifer A. Hults, M.A.**, *Instructional Services Librarian (1998)*  
B.A., Heidelberg College; M.A., Bowling Green State University.
- William Husson, Ph.D.**, *Lecturer in Communication Studies and Theatre (1999)*  
B.A., Merrimack College; M.S., Ph.D., Rensselaer Polytechnic Institute
- Chika Inoue, M.A.**, *Instructor (visiting) of Japanese (1992)*  
B.A., SUNY College at Brockport; M.A., Temple University.
- Charles A. Jamison, M.L.S.**, *Associate Professor and Library Director (1982)*  
B.A., Stockton State College; M.L.S., Drexel University.
- Rebecca Jaroff, Ph.D.**, *Lecturer in English (1999)*  
B.A., Ursinus College; M.A., Ph.D., University of Delaware
- Peter Gordon Jessup, Ph.D.**, *Professor of Mathematics and Computer Science (1973)*  
Joseph T. Beardwood, III Chair of Mathematics  
A.B., Kenyon College; M.S., Ph.D., Lehigh University; M.S., Villanova University.
- John Jewell, Ph.D.**, *Assistant Professor of Psychology (2000)*  
B.S., Lebanon Valley College; M.S., Bucknell University; Ph.D., Kent State University
- James Houghton Kane, J.D.**, *Associate Professor of Politics (1971)*  
B.A., Houghton College; M.A., University of Pennsylvania; J.D., Temple University.
- M. Nzadi Keita, M.A.**, *Assistant Professor (Visiting) of English and Creative Writing (1997)*  
B.A., Temple University; M.A., Vermont College.
- Margot Anne Kelley, Ph.D.**, *Associate Professor of English, Assistant Dean (1991)*  
B.A., College of the Holy Cross; M.A., Ph.D., Indiana University.
- Richard D. King, Ph.D.**, *Associate Professor of History (1988)*  
B.A., M.A., Michigan State University; Ph.D., University of Illinois.
- Laura Knorr-Moliken, B.S.**, *Instructor (Visiting) in Exercise and Sport Science, Head Field Hockey Coach (1999)*  
B.S., Old Dominion University
- Rebecca E. Kohn, Ph.D.**, *Assistant Professor of Biology (1999)*  
A.B., Dartmouth College; Ph.D., John Hopkins University.
- Alice Kuntz, B.S.**, *Lecturer (Visiting) in Exercise and Sport Science (1999)*  
B.S., University of Florida.



**Judith T. Levy, Ph.D., Vice President, Dean, Professor of Chemistry (1996)**  
 B.S., Goucher College; M.S., Ph.D., Johns Hopkins University.

**Joyce T. Lionarons, Ph.D., Professor of English (1984)**  
 B.A., University of Colorado; M.A., Ph.D., University of Denver.

**Anthony L. Lobo, Ph.D., Associate Professor of Biology (1995)**  
 B.S., Pennsylvania State University; Ph.D., Cornell University.

**Annette Vock Lucas, Ph.D., Associate Dean and Professor of French (1967)**  
 B.A., George Washington University; M.A., New York University; Ph.D., Bryn Mawr College.

**Benita Luttcher-Hoorfar, M.A., Lecturer in German (1997)**  
 B.A., University of Hannover, West Germany; M.A., University of Colorado at Boulder.

**Diamantino P. Machado, Ph.D., Lecturer in Sociology (1994)**  
 B.A., La Salle University; M.A., Ph.D., Temple University.

**Deborah L. Malone, M.L.S., Associate Professor, Myrin Library (1985)**  
 B.A., Ursinus College; M.L.S., Drexel University.

**Lynn Alexander Mahaffy, Ph.D., Assistant Professor (Visiting) of Biology (1999)**  
 B.A., Colby College; M.S., Ph.D., Cornell University.

**George Mangus, B.A., Instructor (Visiting) in Exercise and Sport Science, Assistant Football Coach (1999)**  
 B.A., University of Florida

**Valerie Martinez, M.F.A., Assistant Professor (Visiting) of English (2000)**  
 B.A., Vassar College; M.F.A., University of Arizona

**Michael T. McCarthy, M.F.A., Instructor in Art (1996)**  
 B.A., University of Vermont; M.F.A., Tyler School of Art

**Michele C. McLennan, Ph.D., Assistant Professor, Economics and Business Administration (1997)**  
 B.A., Trinity College, Washington, D.C.; M.A., Temple University; Ph.D., University of Pennsylvania.

**Margaret L. McMahon, Ph.D., Lecturer in Psychology (1987)**  
 A.B., State University of New York at Buffalo; M.S., University of Massachusetts; Ph.D., Cornell University.

**David H. Mill, M.L.S., Associate Professor and Reference Librarian (1988)**  
 B.A., Bucknell University; M.L.S., State University of New York-Albany.

**Jay Kenneth Miller, Ph.D., Professor of Communication Studies and Theatre (1984)**  
 B.A., M.C.R.P., Rutgers University; M.A., Miami University; Ph.D., The Union Institute.

**Matthew Mizenko, Ph.D., Assistant Professor of Modern Languages (2000)**

**Douglas Nagy, Ph.D., Associate Professor of Physics (1979)**  
 B.S., M.S. and Ph.D., Pennsylvania State University.

**Jeffrey W. Neslen, Ph.D., Associate Professor of Mathematics (1983)**  
 B.S., Hobart College; Ph.D., University of Rochester.

**Sayumi Nishio, M.A., Instructor (Visiting) of Japanese (1997)**  
 B.S., Sophia University, Tokyo; B.A., Lock Haven University; M.A., University of Wisconsin Madison.

**Frances Claire Novack, Ph.D., Professor of French (1979)**  
 B.A., Barnard College; Ph.D., Cornell University.

## URSINUS COLLEGE CATALOG

- Heather M. O'Neill, Ph.D.**, *Professor of Economics and Business Administration (1986)*  
B.S., B.A., University of Vermont; M.A., Ph.D., Georgetown University.
- Regina Smith Oboler, Ph.D.**, *Associate Professor of Anthropology and Sociology (1988)*  
B.A., Antioch College; Ph.D., Temple University.
- Peter Flint Perreten, Ph.D.**, *Professor of English (1973)*  
B.A., Moorhead State College; M.A., Idaho State University; Ph.D., University of Delaware.
- J. Duke Pesta, Ph.D.**, *Assistant Professor of English (2000)*  
B.A., M.A., John Carroll University; Ph.D., Purdue University
- Sonja Pettingil, M.S.**, *Assistant Director of Continuing Education and Lecturer in Geology (1997)*  
B.S., University of Toronto; M.S., University of Michigan.
- Jason Phillips, Ph.D.**, *Assistant Professor of Economics and Business Administration (1997)*  
B.S., Ph.D., Pennsylvania State University; M.B.A., Texas A&M University
- Pamela Potter-Hennessey, Ph.D.**, *Assistant Professor of Art (1997)*  
B.F.A., The Maryland Institute, College of Art; M.L.A., The Johns Hopkins University;  
Ph.D., The University of Maryland.
- Andrew C. Price, Ph.D.**, *Associate Professor of Chemistry (1990)*  
B.S., University of St. Andrews, Scotland; Ph.D., Purdue University.
- Karen Randall, Ph.D.**, *Lecturer in Economics and Business Administration (1998)*  
B.A., Ph.D., Lehigh University; M.S., Drexel University
- Timothy Raphael, Ph.D.**, *Assistant Professor of Communication Studies and Theatre (2000)*  
B.A., Wesleyan University; M.A. Northwestern University
- The Rev. Charles Rice, M.Div.**, *Chaplain, Visiting Assistant Professor (1997)*  
B.S., United State Coast Guard Academy; M. Div., Crozer Theological Seminary
- Kenneth D. Richardson, Ph.D.**, *Associate Professor of Psychology (1986)*  
B.A., Indiana University of Pennsylvania; Ph.D., Arizona State University.
- Bruce Edward Rideout, Ph.D.**, *Professor of Psychology (1979)*  
A.B., Boston University; M.S. and Ph.D., University of Massachusetts.
- Thomas Richard Rutledge, Ph.D.**, *Assistant Professor of Chemistry (1999)*  
B.A., B.S., Wayne State University; Ph.D., University of Chicago.
- Donna M. Sabella, M.Ed.**, *Lecturer in Modern Languages (1992)*  
B.A., Indiana University; B.S.N., Thomas Jefferson University; M.Ed., Temple University.
- Jeff Salavitabar, M.B.A.**, *Lecturer in Economics and Business Administration (1998)*  
B.S., Tehran Business College; M.A., Pennsylvania State University; M.B.A., Shippensburg University
- Irena Sandler, Ed.D.**, *Lecturer in Education, (1999)*  
B.S., University of Pennsylvania; M.Ed., Beaver College; Ed.D., Temple University
- Kimberly A. Sando, M.S.**, *Assistant Professor (Visiting) and Media Services Librarian (1994)*  
B.S., East Stroudsburg University; M.S., Drexel University.
- Patricia Richards Schroeder, Ph.D.**, *Professor of English (1983)*  
B.A., Ursinus College; M.A., Ph.D., University of Virginia.
- Ray Karl Schultz, Ph.D.**, *Professor of Chemistry (1965)*  
Hain Professor of Chemistry  
B.S., Muhlenberg College; M.S., Ph.D., Lehigh University.

- Michael Schwartz, Ph.D., Lecturer in Biology (1999)**  
 B.S., Brandeis University; Ph.D., Carnegie Mellon University
- Domenick Scudera, M.F.A., Assistant Professor of Communications Studies and Theatre (1999)**  
 B.A., Colgate University; M.F.A., Pennsylvania State University.
- Jenepher Shillingford, M.Ed., Eleanor Frost Snell Chair of Health and Physical Education (1954)**  
 B.S., Ursinus College; M.Ed., Temple University; Doctor of Science, (Honorary) Ursinus College
- John Winfield Shuck, Ph.D., Professor of Mathematics (1977)**  
 B.S., Massachusetts Institute of Technology; M.S., Tufts University; Ph.D., Northeastern University.
- Xochitl Shuru, M.A., Assistant Professor of Modern Languages (2000)**  
 B.A., Loyola Marymount University; M.A., University of California
- James M. Sidic, Ph.D., Professor of Biology (1983)**  
 B.S., M.S., Ph.D., Notre Dame University.
- Peter Forrest Small, Ph.D., Professor of Biology (1972)**  
 B.S., Austin Peay State University; M.S., East Tennessee State University; Ph.D., Miami University.
- Paul Stern, Ph.D., Professor of Politics (1989)**  
 B.A., Michigan State University; M.A., Ph.D., University of Chicago.
- James J. Stewart, Ph.D., Lecturer in Latin (1999)**  
 B.A., Carleton University; M.Phil, University of Glasgow; Ph.D., University of Queensland
- John Strassburger, Ph.D., President of the College, Professor of History (1995)**  
 B.A., Bates College; M.A., Cambridge University; Ph.D., Princeton University.
- Martha Carroll Takats, Ph.D., Professor of Physics (1969)**  
 Guillian H. Clamer Chair of Physics  
 B.A., Wellesley College; M.S., University of Wisconsin; Ph.D., University of Pennsylvania.
- Jane Tausig, Ph.D., Lecturer in Sociology (1998)**  
 B.S., M.S.W., Adelphia University; Ph.D., Bryn Mawr College
- Lynn M. Thelen, Ph.D., Professor of German (1982)**  
 B.A., Pennsylvania State University; M.A., Ph.D., University of Pennsylvania.
- Linda C. Thiel, Ph.D., Assistant Professor of Mathematics (1993)**  
 B.S., Towson State University; M.Ed., Millersville State College; Ph.D., Drexel University.
- Victor J. Tortorelli, Ph.D., Professor of Chemistry (1981)**  
 Samuel H. and Anna M. Hess Professor of Chemistry  
 B.S., Manhattan College; M.A., Ph.D., Princeton University.
- Colette Trout, Ph.D., Professor of French (1983)**  
 License, Universite de Nanterre; M.A., Ph.D., Bryn Mawr College.
- Jon Volkmer, Ph.D., Professor of English (1987)**  
 B.A., University of Colorado at Denver; M.A., University of Denver;  
 Ph.D., University of Nebraska at Lincoln.
- Tina Wailgum, Ph.D., Associate Professor of Exercise and Sport Science (1983)**  
 B.S., Ursinus College; M.Ed., Ph.D., Temple University.
- Rosemarie D. Wait, M.Ed., Lecturer in Mathematics (1993)**  
 B.S., Kutztown University; M.Ed., Pennsylvania State University.

## URSINUS COLLEGE CATALOG

**Francis J. Waller**, *Visiting Research Professor in Chemistry (1999)*

B.S., Niagara University; Ph.D., University of Vermont

**John Moore Wickersham, Ph.D.**, *Professor of Classics (1972)*

B.A., M.A., University of Pennsylvania; B.A., New College, Oxford; Ph.D., Princeton University.

**Eric J. Williamsen, Ph.D.**, *Associate Assistant Professor of Chemistry (1995)*

B.A., Carleton College; Ph.D., University of North Carolina.

**Samuel W. Winslow, Jr., M.A.**, *Assistant Professor (Visiting) of Politics (2000)*

B.A., Rutgers University; M.S.S., Bryn Mawr College; M.B.A., The Wharton School; M.A., Rutgers University

**L. Kathlene Wright, M.Ed.**, *Lecturer in Exercise and Sport Science (1998)*

A.S., Harcum Junior College, B.S., West Chester University, M.Ed., The Pennsylvania State University.

**Theodore Andrew Xaras, M.F.A.**, *Professor of Fine Arts (1973)*

B.F.A., Philadelphia College of Art; M.F.A., Tyler School of Art.

**Natalia Zabegailo, M.A.**, *Lecturer in French (1994)*

B.A., Kiev State University; M.A., Bryn Mawr College.

**Stephanie Zenorini, B.A.**, *Lecturer in Exercise and Sport Science (1999)*

B.A., Ursinus College

Date in parentheses is date of first appointment at Ursinus College.

## HOLDERS OF ENDOWED CHAIRS, 1999-2000:

Joseph T. Beardwood, III Chair of Mathematics . . . . . Peter Jessup

Brownback-Wagner Chair in Health Sciences . . . . . Ellen Dawley

Guilliam H. Clamer Chair of Physics. . . . . Martha Takats

Hain Professorship of Chemistry . . . . . Ray K. Schultz

William F. Heefner Chair of Music. . . . . John H. French

Samuel H. and Anna M. Hess Professorship in Chemistry . . . . . Victor Tortorelli

Eleanor Frost Snell Chair of Health and Physical Education . . . . . Jenepher P. Shillingford

The Davis Visiting Professorship of Judeo-Christian Values, 1999 . . . . . Parker Palmer

## OFFICERS OF THE FACULTY

**Chairman:** President Strassburger

**Secretary:** Professor Takats

**Coordinator of Freshman advising:** Professor Kelley

**Freshman Advisers**

Ms. Burke	Professor Engstrom	Professor O'Neill
Professor Cameron	Miss Fryer	Professor Perreten
Professor Chambliss	Professor Gaede	Professor Potter-Hennessey
Professor Clark	Professor Gallagher	Professor Richardson
Professor R. Clouser	Professor Goetz	Professor Richardout
Professor Coleman	Professor Hardin	Mrs. Rinde
Professor Czubaroff	Professor Hemphill	Professor Rutledge
Ms. David	Professor Hood	Professor Sando
Professor Davidson	Mr. Jamison	Professor Schultz
Professor E. Dawley	Professor Jessup	Professor Stern
Professor R. Dawley	Professor Kane	Professor Takats
Professor de Arana	Professor Keita	Professor Tortorelli
Professor Dole	Professor Kelley	Professor Trout
Professor Doughty	Professor King	Professor Volkmer
Professor Economopoulos	Mr. Mill	Professor Wickersham
Professor Edwards	Professor Neslen	Professor Williamsen
Professor England	Professor Oboler	Professor Xaras

**Major Program Advisers**

Advisers will be assigned by the chairperson or coordinator of the student's major. They are:

**Anthropology and Sociology:** Professor Oboler

**Biology:** Professors Robert Dawley and Ellen Dawley

**Chemistry:** Professor Tortorelli

**Classics:** Professor Wickersham

**Communication Studies and Theatre:** Professor Miller

**Computer Science and Mathematics:** Professor Shuck

**East Asian Studies:** Professor Clark

**Economics and Business Administration:** Professor Economopoulos

**English:** Professor Dole

**Exercise and Sport Science:** Professor Wailgum

**French:** Professor Trout

**German:** Professor Clouser

**History:** Professor Hemphill

**International Relations:** Professor Hood

**Mathematics:** Professor Shuck

**Philosophy and Religion:** Professor Goetz

**Physics:** Professor Takats

**Politics:** Professor Hood

**Psychology:** Professor Chambliss

**Spanish:** Professor Cameron

**Pre-Professional Advisers**

**Education:** Associate Professor Gross

**Engineering:** Professor Takats

**Law:** Professor Kane

**Medicine:** Associate Professor Ellen Dawley

**Theology:** Professor Goetz

**International Student Adviser:** (to be designated)

**Study Abroad Coordinator:** Melissa Hardin

**Class Advisers**

**Class of 2004:** (to be designated)

**Class of 2003:** Professor England

**Class of 2002:** Professor Price

**Class of 2001:** Professor Economopoulos

**Class of 2000:** Professor Hemphill

## URSINUS COLLEGE CATALOG

### FACULTY COMMITTEES (MEMBERSHIP, FALL 1999)

**Academic Council:** Strassburger, Levy (ch.), Doughty (H '01), Gaede (S '01), Kane (SS '01), French (H '00), Lobo (S '00), Gallagher (SS '00), Goddard (at Lg '01), Schroeder (At Lg '00), Aaron Ranck, *Class of 2002*, Erica Dietrich, *Class of 2000*

**Academic Standards and Discipline:** Levy (ch.), Boris, Nolan, Lange, Lucas, Clark (H '02), Bowers (SS '01), Tortorelli (S '00), England, Kelley

**Academic Support:** Lucas, Mill (H '02), Goddard (S '01), Oboler (SS '00), Nagy, Richardson (ch.), Meg Restine, *Class of 2000*, Tom Pomenti, *Class of 2003*

**Academic Computing and Instructional Technology Subcommittee:** Dole, R. Dawley, de Arana, Jamison, Chambliss, Hagelgans, J. King (ch.)

**Arts and Lectures Subcommittee:** David(co-ch.), Hanover (co-ch.), Gaede, Hagelgans, Korenkiewicz, Lucas, Oboler, Potter-Hennessey, Sando, Hudson B. Scattergood, Trout, Sally Widman, Xaras

**Appeals:** 3 administrators, Wickersham (H '02), Fields (S '01), Richardson (SS '00).

**Buildings and Grounds:** Board Members, Strassburger, Klee, Rice, Nolan, Guilmette, French ('02), Perreten ('00), Hadley Schmoyer, *Class of 2000*, Dipak Pandya, *Class of 2000*

**Campus Planning and Priorities:** Strassburger (ch.), DeFeliciano, Levy, Guilmette, Rice, Lucas, E. Dawley (S '02), Dole (H '01), Harris (SS '0), Sidie (At Lg. '02), Borsdorf (At Lg. '01), Rebecca Rinehart, *Class of 2002*, Hadley Schmoyer, *Class of 2000*

**Diversity:** Paulette Patton, Rice, Cameron ('02) (ch.), Thiel ('01), Fryer ('00), Deborah Sarmiento, *Class of 2002*, Amber Natale, *Class of 2002*, Edward Ford, *Class of 2003*

**Enrollment:** DeFeliciano, Guilmette, Sparrow, Small, Edwards (H '01), Schultz (S '00), Richardson (SS '99) (ch.), Kelley (At Lg. '00).

**Faculty Affairs:** Strassburger, Guilmette, Levy, Richardson (SS '02), R. Dawley (S '01), Goetz (H '00).

**Faculty Development:** Levy (ch.), England (SS '02), Lionarons (H '01), Williamsen (S '00), Chambliss (At Lg. '02), French (At Lg. '01).

**Governance:** Wickersham (H '02), Fields (S '02), Oboler (SS '02), Dole (H '01), Coleman (S '01), O'Neill (SS '01), Mill (H '00), Hess (S '00), Fitzpatrick (SS, '00) (ch.).

**Graduate and Professional Education:** Lobo (S '02), Kane (SS '01), Dole (H '00), McLennan, Wickersham (ch.), Matt Bigert, *Class of 2000*, Mark Wolfrey, *Class of 2003*

**Intercollegiate Athletics:** Akin, Borsdorf ('01), Jamison, Lobo ('00), O'Neill ('02), Reilly, Dave Yansick, *Class of 2003*, Sberod Smallman, *Class of 2003*, Joe Bottillo, *Class of 2003*, Brandy Kline, *Class of 2001*, Kelly McGuffin, *Class of 2001*, Jonell Pollarine, *Class of 2003*

**Judiciary Board:** Borsdorf ('02), Economopoulos ('01), Allen ('00), Stern (ch.), Kristin Geist, *Class of 2000*, Mike Edwards, *Class of 2000*, Andy Gerchak, *Class of 2000*; **Alternates:** Potter-Hennessey ('02), Hardin ('01), Rideout ('00), Heather Potts, *Class of 2002*; Danielle Thompson, *Class of 2001*; Neil Shab, *Class of Class of 2002*

**Outcomes Assessment:** Lucas, J. King, Rinde, Davidson (S '02) (ch.), Economopoulos (SS '01), Hemphill (H '00), Stephanie Garwin, *Class of 2002*, Suzanne Schram, *Class of 2001*

**Promotion and Tenure:** Strassburger, Levy, E. Dawley (S '02), Hood (SS '01), Miller (H '00), Gallagher (At Lg. '01)

**Student Activities and Services:** Nolan, McNulty, Barnes ('01), Edwards ('00), Engstrom, Volkmer ('00), Edwin Chacko, *Class of 2003*, Young Park, *Class of 2002*, Sue Fialkowski (ch.), *Class of 2002*, Perry Kulman, *Class of 2003*, Joe Pope, *Class of 2002*, Erny Hoke Jr., *Class of 2000*

### FACULTY SECRETARY

**Office Holder:** Takats ('00)

### PARLIAMENTARIAN

**Office Holder:** Jessup ('01)

**ALUMNI ASSOCIATION EXECUTIVE COMMITTEE - 1999-2000**

<b>President:</b>	Susan A. Benner, 1976
<b>President Elect:</b>	Keith Kemper, 1979
<b>Secretary:</b>	Maria Costa Woytek, 1992
<b>Faculty Representatives:</b>	Barbara A. Boris, 1983 Judith E. Fryer, 1965
<b>Alumni Representatives:</b>	Beth Bingaman-Hook, 1987 Neil S. Brown, 1984 Robert W. Fleming Jr., 1962 Vincent Gravina III, 1971 Sarah Jane Kennedy, 1971 Bruce C. McMillin, 1976 Daniel Scholl, 1987 David J. Viola, 1982 Lynne Y. Watson, 1961
<b>Evening Division Representative:</b>	Barbara E. Forbes, 1990
<b>Alumni Representatives to the Board of Trustees:</b>	Wilbert D. Abele, 1961 Phillip S. Brackin, M.D., 1963 Paul Leiser, 1966 Dr. Albert M. Paolone, 1955 The Rev. Dr. Gregory R. Wenholt, 1975
<b>Past President:</b>	Phillip S. Brackin, M.D., 1963
<b>Chair, Young Alumni Organization:</b>	Christian P. Sockel, 1993
<b>Chair, Bruins Club:</b>	Gregory R. Gifford, 1981
<b>Ursinus College Alumni Awards:</b>	Adele P. Boyd, 1953 George W. Cawman Jr., 1966 Carol D. Hess, 1982 Carol Clark Lawrence, 1973 Stephen H. Rovno, M.D., 1954 William J. Stout, 1955 The Hon. Judtih Yaksin, 1963
<b>Alumni Senior Awards:</b>	Tarika S. Tiggett, 1999 Sean C. McCoy 1999

**AWARDS - 1999**

**The Alumni Senior Award:** Tarika Shareen Tiggett, 1999, Sean C. McCoy, 1999  
*Presented by the Alumni Association of Ursinus College to one man and one woman of the graduating class in recognition of leadership qualities demonstrated during their undergraduate years.*

**The American Chemical Society Award:** John Edward Shilling, 1999  
*Awarded annually to the student who has made the most significant advance in his or her study of chemistry.*

**The American Chemical Society Award in Analytical Chemistry:** Matthew J. Bigert, 2000  
*Awarded to a junior displaying an aptitude for a career in analytical chemistry. This award is sponsored by the Analytical Chemistry Division of the American Chemical Society.*

**The American Chemical Society Award in Organic Chemistry:** James E. Fielder, 2000  
*Awarded to a chemistry major who has excelled in the study of organic chemistry. This award is sponsored by the Polymer Education Committee of the American Chemical Society.*

**The American Institute of Chemists Award:** Jason S. Forsell, 1999  
*Awarded to the senior chemistry major who has demonstrated potential for advancement in the chemical professions.*

**The Cyrus E. Beekey Prize:** Geoffrey David Mills, 1999  
*Endowed by Viola Sweigart Beekey, '29, and her son, Cyrus E. Beekey Jr., '64, and awarded to a senior who has been an outstanding premedical student.*

## URSINUS COLLEGE CATALOG

**The Biology Laboratory Technique Award:** Leslie Erin Strausbaugh, 1999

*Presented to the student exhibiting the best laboratory technique.*

**The Blake - Bause Prize:** Jennifer B. Grace, 1999

*Provided by George S. Bause, M.D., Class of 1977, to honor his wife, Ramona A. Bause, M.S.W., Class of 1978. Awarded to a graduating psychology major who has demonstrated excellent scholarship in psychology and acceptance into a graduate school of social work, criminology or criminal justice.*

**The Boeshore Prize:** Amanda M. Huffman, 2002

*Presented for excellence in the study of Greek.*

**Chemistry Laboratory Technique Award:** Kimberly N. Algayer, 1999, Kelly Sue Much, 1999

*Presented to the student exhibiting the best laboratory technique.*

**The CRC Press Freshman Chemistry Achievement Award:** Cheri M. Gaust, 2002

*Awarded annually, by the Chemical Rubber Company Press, to the freshman achieving the highest academic average in chemistry.*

**The Alfred L. Creager, '33, Prize:** Christopher M. Cocca, 2002, Geoffrey David Mills, 1999

*Established by Ray Hamilton, '57, and awarded annually to the student who contributes the best work, either fiction or nonfiction, to a campus publication.*

**The Cub and Key Prize:** David J. Aria, 2002, Lucas M. Dennis, '01

*Awarded annually to the male student who at the end of the first term has the highest scholastic standing.*

**The J. Douglas Davis Prize:** Andrew M. Paparella, 1999

*Established by Ray Hamilton, '57, the income to be awarded annually to an outstanding student in history.*

**The George Ditter Prize:** Michael J. Traud, 1999

*Awarded each year to the graduating senior whose work in history and political science most promises the perpetuation of democratic self-government. The prize was established by J. William Ditter in memory of his father and is continued through the generosity of J. William Ditter Jr., '43.*

**The Geoffrey Dolman Prize in Creative Writing:** Paul Andrew Guidry, 1999

*Created in 1996 in memory of Geoffrey Dolman, the prize to be awarded to a student who demonstrates proficiency in creative writing.*

**The Duttera Prize:** Alicia M. Gunther, 2000

*Contributed by Mrs. Amos Duttera, and awarded yearly to the student attaining the highest standing in the study of church history.*

**The Ehret Prize:** Donald W. Asper, 1999

*Established by bequest of The Reverend Harry J. Ebret in honor of his son, Robley W. Ebret, '39, and awarded each year to a student who has excelled in athletics.*

**The Faculty Prize in Computer Science:** Simon Rak, 2000

*Established in 1989 by the faculty of the Department of Mathematics and Computer Science and awarded to an outstanding computer science student.*

**The Faculty Prize in History:** Not Awarded in 1999

*Established in 1996 by the faculty of the history department and awarded to an outstanding student in history.*

**The Faculty Prize in Mathematics:** Benjamin C. Baehr, 1999, Susan Elizabeth Pauley, 1999

*Established in 1989 by the faculty of the Department of Mathematics and Computer Science and awarded to an outstanding mathematics student.*

**The Faculty Prize in Politics:** Not Awarded in 1999

*The Faculty Award in Politics is awarded from time to time to students demonstrating exceptional scholarly accomplishment in the study of politics and international relations.*

**The Edwin M. Fogel Prize:** Not Awarded in 1999

*Endowed by Dr. Edwin M. Fogel and awarded each year to a student who has written an essay on the contributions of the Pennsylvania Germans to American life and culture.*

**The Philip H. Fogel Memorial:** Pamela J. Jastrzembki, 2001

*Endowed by Mrs. Edwin J. Fogel in memory of her son, and awarded each year to the member of the senior class who has done the best work in the Department of Religion.*



**The French Award:** Susan Elizabeth Pauley, 1999

*Established in 1976 by Dr. Albert L. Reiner, former chairman of Romance Languages, to honor an outstanding student in French.*

**The German Award:** Kimberly N. Algayer, 1999, Jeevan S. Sekhar, 1999, Katie E. Tuffy, 1999  
*Given by the Modern Languages Department to honor an outstanding student in German.*

**The Thomas P. and Frances T. Glassmoyer Scholastic Award:** Susan Elizabeth Pauley, 1999

*Awarded annually to the member of the graduating class with the highest scholastic average for four years at Ursinus.*

**The Olive Sargeant Hamm Award:** Kelly Alison Donohue, 1999

*Established in 1998 by Olive S. Hamm, Class of 1929, the first recipient of the "All Around Award" for the senior woman who exemplifies "the best in college life (athletically, socially and scholastically)."*

**The Elizabeth Hankel Memorial Prize:** Monique Y. Whiting, 1999

*Presented in honor of Elizabeth A. Hankel and awarded to the senior media services assistant who best exemplifies the ideals of commitment, leadership and maturity.*

**The Robin Blood Harris, '56, Memorial Prize:** Jennifer Adele Zwilling, 1999

*Established by her family and friends for the senior woman who exemplifies those outstanding qualities of leadership and scholarship that characterized Robin's association with Ursinus.*

**The Horioka Latin Prize:** Not Awarded in 1999

*Established in 1993 by Margaret A. Horioka, '77, and awarded to a graduating senior who has excelled in Latin.*

**The Ronald C. Kichline Prize:** Kevin R. Bailey, 1999

*Awarded annually to a senior who has excelled in athletics.*

**The Laughlin Award:** Jennifer Lynn deRuyter, 1999

*Endowed by Henry P. Laughlin, M.D., '38, for the student who has made outstanding contributions to his or her class and to the college.*

**The William L. Lettinger Chemistry Award:** Thomas J. Malia, 1999

*Endowed by his wife, Sharon B. Lettinger, '66, in memory of William L. Lettinger, '65, and awarded annually to a member of the senior class who has demonstrated promise for graduate studies in the field of chemistry.*

**The Elizabeth Rockefeller McCain Prize:** Daniel M. Gallagher, 2001, Jeffrey Church, 2001

*Endowed by the late George Nox McCain and awarded annually to the student who at the end of the sophomore year has shown the greatest ability in the use of the English language as evidenced by work in composition and literature.*

**The Merck Index Award:** Danielle Erin Lann, 1999

*For the outstanding preprofessional candidate who is a chemistry major.*

**The Professor Eugene H. Miller Prize:** Joanna M. Doyle, 1999

*Endowed by the Honorable Hermann Frederick Eills, '43, and awarded annually for the best essay on a subject in political science.*

**The Jessie Ashworth Miller Prize:** Ericka C. Hill, 1999

*Established by Ray Hamilton, '57, the income to be awarded annually to an outstanding student of anthropology and sociology.*

**The Wayne F. Millward, '57, Memorial Prize:** John Allen Shoen, 1999

*For excellence in the theatre program, established in 1988 by Ray Hamilton, '57, the income to be awarded annually to the student who contributes the most to Ursinus' theatre program.*

**The George H. Nietzsche Prize:** Not Awarded in 1999

*Awarded annually to the graduating senior who submits the best essay, story or poem on any phase of Pennsylvania German folklore, dialect or history.*

**The Mary Onopchenko, '85, Memorial Prize:** Amanda M. Hektor, 1999, Susan Elizabeth Pauley, 1999

*The Mary Onopchenko, '85, Memorial Prize, established in loving memory of Mary by her family and friends, to be awarded to an outstanding senior who plans a career in law.*

## URSINUS COLLEGE CATALOG

**The Paisley Prize:** Oana Nechita, 2000

*Awarded for the best dissertation by a member of the senior class on an assigned topic involving the thoughtful application of the principles of Christianity to the problems of practical life.*

**The Parsons Prize:** Melissa J. Grafe, 1999, George Zachariah Hankins, 1999

*Awarded annually to an outstanding student of American history. This prize was established by Ray Hamilton, '57, in memory of William T. Parsons, '47, professor of history.*

**The Pennsylvania Institute of Certified Public Accountants Prize:** Amy Marie Brown, 1999  
*Presented to the outstanding senior in accounting.*

**The Peters Prize:** Rebekah J. Ruth, 2000

*Awarded annually for excellence in the study of the Bible.*

**Professor William J. Phillips Prize:** Suzan A. Maylath, 1999

*Awarded annually to the Bachelor of Business Administration degree candidate who completes the equivalent of the junior year with the highest cumulative average.*

**The Miriam and Irving N. Rosenthal Memorial Award:** Not Awarded in 1999

*Established in 1989 by the gift of Professor William E. Rosenthal to commemorate in perpetuity his beloved parents, who instilled in him a sense of the intrinsic value of lifelong learning. To be awarded to a female rising senior who has clearly demonstrated an interest in pursuing graduate study in the mathematical sciences.*

**The W.W. Smith Prize:** Serena Roxann Weinberg, 1999, Jason S. Forsell, 1999

*Awarded by the W.W. Smith Charitable Trust of Bryn Mawr, Pennsylvania, to seniors with superior academic records who previously won W.W. Smith Scholar financial grants.*

**The Spanish Award:** Francine Theresa Cuniffe, 1999, Carrie A. Haslbeck, 1999

*Given by the Modern Language Department to honor an outstanding student in Spanish.*

**The Harry C. Symons Award in Economics:** William J. Stephani, 1999, Daniel J. Gedrich, 1999

*Given to a senior in economics and business administration who best exemplifies the traits and integrity of long-time professor Harry C. Symons, and shares in his love of Ursinus College by supporting and engaging in the life of the college.*

**The Robert Trucksess Prize:** Kelly Lynn Brewer, 1999, Heather D. McDowell, 1999

*Awarded annually to a student in the senior class who plans to study law and who shows unusual promise.*

**The Teresa L. Urban Leadership Award:** Brian E. Ebersole, 1999

*Awarded annually by the USGA to a senior in recognition for outstanding leadership.*

**The Wagman Prize:** Barry Robert Keppard, 1999, Jacquelyn Marie Hickey, 1999

*Awarded annually by Mr. and Mrs. Morris M. Wagman in memory of their son, Dr. Sidney Louis Wagman, '51, to an outstanding and deserving student who has demonstrated loyalty to high ideals.*

**Wall Street Journal Award:** Amanda M. Hektor, 1999

*Presented to the outstanding senior in economics and business administration.*

**The Professor Elizabeth B. White Award:** Joanna M. Doyle, 1999

*Endowed by the Honorable Hermann Frederick Eilts, '43, and awarded annually for the best essay on a subject in history.*

**The Whittian Prize:** Alicia K. Morgans, 2002

*Awarded annually to the woman student who at the end of the first term has the highest scholastic standing.*

**The William B. Williamson Prize in Philosophy:** Samuel S. Hwang, 1999

*Established in 1989 in honor of William B. Williamson, professor of philosophy and chairman of the Department of Philosophy and Religion from 1968 to 1988. Awarded annually to the student who best exemplifies the Socratic spirit of inquiry in both oral and written expression on issues which demand human attention and solution.*

**FACULTY AWARDS**

**The Laughlin Professional Achievement Award:** Paul Stern, professor of politics  
*Endowed by Henry P. Laughlin, M.D., '38, for a faculty member who has made significant contributions to scholarship.*

**The Lindback Award:** Shirley K. Eaton, professor of Spanish\*  
*Given at Ursinus College and at other colleges for distinguished teaching.*

\*Deceased

**CLASS OF 1999 OFFICERS**

- President:** Ravi Jayendra Chokshi  
**Vice President:** Denise Marie Velez  
**Secretary/Treasurer:** Melissa L. Forbes.  
**Fund-raising Chairperson:** Elizabeth M. Lamer  
**Social Chairperson:** Paul Henry Norris  
**USGA Representative:** Amanda E. Johnson

- Valedictorian:** Susan Elizabeth Pauley  
**Salutatorian:** Benjamin C. Baehr

**SUMMA CUM LAUDE**

- |                   |                        |                      |
|-------------------|------------------------|----------------------|
| Benjamin C. Baehr | Thomas Ray Holstein    | Jeevan S. Sekhar     |
| Brenda J. Donigan | Allan Robert Moreland  | John Edward Shilling |
| Joanna M. Doyle   | Susan Elizabeth Pauley | David Matthew Smith  |
| Amy Lynn Elliott  | Carolyn Peters         |                      |
| Marci Lyn Frey    | Dante M. Pietrinferni  |                      |

**MAGNA CUM LAUDE**

- |                      |                       |                         |
|----------------------|-----------------------|-------------------------|
| Kimberly N. Algayer  | Saramati Jayaraman    | Andrew M. Paparella     |
| Kevin R. Bailey      | Sunitha Sara John     | Thomas D. Regan         |
| James P. Brett       | Daniel C. Jones       | Catherine Anne Riley    |
| Amy Marie Brown      | Jenna S. Katits       | Scott Alan Sandt        |
| Pavel Y. Chernak     | Christine A. Kenny    | James Allan Schiel      |
| Melissa L. Forbes    | Gregory Klein         | David Li-Kwong Tam      |
| Snehal V. Gandhi     | Danielle Erin Lann    | Laura K. Thomas         |
| Melissa J. Grafe     | Thomas J. Malia       | Lauren Marie Wagman     |
| Thomas F. Haberbusch | Anthony A. Mazzarulli | Cheryl Sanson Whitcombe |
| Amanda M. Hektor     | Barbara S. Moyer      |                         |

**CUM LAUDE**

- |                            |                        |                           |
|----------------------------|------------------------|---------------------------|
| Laurie Christine Barilotti | Barry Robert Keppard   | Kathleen Clo Reynolds     |
| Tricia Michele Beatty      | Danielle L. Letting    | Joyce Gail Richardson '98 |
| Kelley Lynn Brewer         | Mary E. Love           | Sharon Jo Roderick        |
| Maryanne Ragan Brooke      | Brandace J. McLachlan  | Donna Lynn Schiel         |
| Donna L. Dugan             | Geoffrey David Mills   | John M. Sears             |
| Jason S. Forsell           | Louise Barbara Moffett | David M. Sobrinski        |
| Jillian Rachel Grau        | Kelly Sue Much         | Janine K. Soper           |
| Karen Jennifer Hahn        | Angela C. Mullan       | Leslie Erin Strausbaugh   |
| Carrie A. Haslbeck         | Tyffany D. Neiheiser   | Katie E. Tuffey           |
| Jacquelyn Marie Hickey     | Louis P. Nemphos       | Serena Roxann Weinberg    |
| Kimberly D. Hoover         | Anthony J. O'Hara Jr.  | Russell Stafford Whelan   |
| Juliet Mae Hutcheson       | Kartic Padmanabhan     | Buffy Michelle Young      |

## URSINUS COLLEGE CATALOG

### DEPARTMENTAL HONORS

**Anthropology & Sociology:** Ericka C. Hill

**Art History:** Jennifer Adele Zwilling

**Biology:** Karey R. Carlson, Snehal V. Gandhi, Danielle L. Letting, John M. Sears, Devon Joseph Shedlock, Lauren Marie Wagman, Russell Stafford Whelan

**Chemistry:** Kimberly N. Algayer, Christine A. Kenny, Danielle Erin Lann, Thomas J. Malia, Kelly Sue Much, John Edward Shilling

**Communication Studies and Theatre:** Melissa L. Forbes\*

**East Asian Studies:** Andrew M. Paparella\*

**Economics and Business Administration:** Amy Marie Brown, Daniel J. Gedrich

**Exercise and Sport Science:** Laurie Christine Barilotti, Sean C. McCoy

**French:** Susan Elizabeth Pauley\*

**German:** Kimberly N. Algayer, Jeevan S. Sekhar

**History:** Joanna M. Doyle,\* Melissa J. Grafe, George Zachariah Hankins, David Li-Kwong Tam, Michael J. Traud

**International Economics:** Amanda M. Hektor

**Politics:** Ryan Anthony Costello, Jodie M. Poth, Mary Ann Robbins

**Psychology:** Brandace J. McLachlan,\* Laura K. Thomas\*

**Spanish:** Francine Theresa Cunniffe, Christine A. Kenny

**Spanish and International Relations:** Carrie A. Haslbeck

**Spanish and Art:** Janine K. Soper

\*Distinguished Honors

### COLLEGE HONORS

#### Phi Beta Kappa

Kimberly N. Algayer, 1999

Benjamin C. Baehr, 1999\*

Kevin R. Bailey, 1999

James P. Brett, 1999

Amy Marie Brown, 1999

Pavel Y. Chernak, 1999

Joanna M. Doyle, 1999

Melissa L. Forbes, 1999

Jason S. Forsell, 1999

Melissa J. Grafe, 1999

Meghan B. Gualtieri, 2000\*\*

Thomas F. Haberbusch, 1999

Amanda M. Hektor, 1999

Jacquelyn Marie Hickey, 1999

Juliet Mae Hutcheson, 1999

Saramati Jayaraman, 1999

Sunitha Sara John, 1999

Daniel C. Jones, 1999

Christine A. Kenny, 1999

Gregory Klein, 1999

Danielle E. Lann, 1999

Thomas J. Malia, 1999

Anthony A. Mazzarulli, 1999

Melissa S. Moyer, 2000\*\*

Andrew M. Paparella, 1999

Susan Elizabeth Pauley, 1999\*

Anthony J. Perri III, 2000\*\*

Carolyn Peters, 1999

Simon Rak, 2000\*\*

Jeevan S. Sekhar, 1999

John Edward Shilling, 1999

Leslie Erin Strausbaugh, 1999

David Li-Kwong Tam, 1999

Laura K. Thomas, 1999

Katie E. Tuffey, 1999

Christina E. Valiant, 2000\*\*

Lauren Marie Wagman, 1999

Buffy Michelle Young, 1999

\*currently seniors,  
elected as juniors

\*\*currently juniors

#### CUB AND KEY

Donald W. Asper, 1999

Benjamin C. Baehr, 1999

Kevin R. Bailey, 1999

Michael O. Boyer, 2000

Robert J. Brychta, 2000

Pavel Y. Chernak, 1999

Salvatore R. Ferrarello, 2000

James E. Fielder, 2000

Andrew E. Gerchak, 2000

Snehal V. Gandhi, 1999

George Zachariah Hankins,  
1999

Daniel C. Jones, 1999

Barry Robert Keppard, 1999

Angelo C. Lepore, 2000.

Sean C. McCoy, 1999

Geoffrey David Mills, 1999

Anthony J. Perri III, 2000

Jeevan S. Sekhar, 1999

Devon Joseph Shedlock, 1999

Spencer S. Shelly, 2000

Joseph E. Sprague, 2000

David Li-Kwong Tam, 1999

Mark G. Toscano, 2000

Michael J. Traud, 1999

**WHITIANS**

Kimberly N. Algayer, 1999  
 Kelley Lynn Brewer, 1999  
 Candice E. Capstick, 1999  
 Stacy L. Dennery, 2000  
 Jamie L. DiBlassio, 2000  
 Jamie L. Eissler, 1999  
 Melissa L. Forbes, 1999  
 Kristin L. Geist, 2000  
 Erin K. Golembewski, 2000  
 Kristen Marie Griffin, 1999  
 Michelle L. Grubby, 1999

Meghan B. Gualtieri, 2000  
 Jennifer J. Hansen, 2000  
 Jacquelyn Marie Hickey, 1999  
 Christine A. Kenny, 1999  
 Kelly M. Knapp, 2000  
 Amanda J. Lewis, 2000  
 Mary E. Love, 1999  
 Kimberly Elizabeth Madden, 1999  
 Brandace J. McLachlan, 1999  
 Sarah N. Morrissey, 2000

Oana Nechita, 2000  
 Susan Elizabeth Pauley, 1999  
 Rebecca E. Petre, 2000  
 Janel S. Reppert, 2000  
 Hadley A. Schmoyer, 2000  
 Caitlin V. Sigler, 2000  
 Leslie Erin Strausbaugh, 1999  
 Susan O. Varghese, 2000  
 Parul V. Vora, 2000

**1999 GRADUATES**

**Associate in Arts**

Michelle Raquel Jackson 1998

**Associate in Business**

**Administration**

Dorothy H. Asbert  
 Scott A. Barbera  
 Jessica Bishop  
 Richard P. Branco Jr.  
 Gerald N. Clemmer  
 Tracy A. Dankel  
 Nicholas J. Fusco  
 Jill Graser 1998  
 Joan C. Hackett  
 Carol A. Hall  
 Theresa M. Holowis  
 Patricia Ann Johnson  
 Lisa Marie Kucharik  
 Sandra M. Maloney  
 Christina M. Mehl  
 Barry S. Millard 1998  
 Joseph Jay Paul  
 Joanne S. Petko  
 Kimberly Anne Saldutti  
 Sharon A. SchAAF  
 Teri L. Sheets 1998  
 Rachelle Stevenson  
 Tanya L. Walsh  
 Donald K. Wampole

**Bachelor of Business**

**Administration**

Barbara Louise Bahner  
 Laura Michelle Bedford  
 Maryanne Ragan Brooke  
 William Anthony Bullotta  
 Margaret Rose Cherry  
 Darlene Marie Dassy  
 Karen Davidheiser  
 Brenda J. Donigan

Donna L. Dugan  
 Amy Lynn Elliott  
 Jody Lynn Fink  
 Jeanette M. Frederick 1998  
 Marci Lyn Frey  
 Angela Gambone  
 Donna O. Gillenwater  
 Mary Marabito Grebe  
 Dawn M. Hacker  
 Thomas Ray Holstein  
 James Johnson Jr.  
 David R. Kawczynski  
 Kathleen F. Kissinger 1998  
 Diane Koenig 1998  
 Nathan Michael Lee  
 Michael Angelo Mascaro  
 Barbara Ann McCoskery  
 Mark K. Messinger  
 Christy Lee Miller  
 Louise Barbara Moffett  
 Lori L. Monappella  
 Allan Robert Moreland  
 Lisa Anne Moriarity  
 Barbara S. Moyer  
 Dante M. Pietrinferni  
 Sharon Jo Roderick  
 Scott Alan Sandt  
 Donna Lynn Schiel  
 James Allan Schiel  
 Margaret Ann Curran Seifried  
 Martine M. Shendge 1998  
 Lisa A. Sherpinsky  
 Walter H. Singleton III 1998  
 David Matthew Smith  
 Eric R. Sorg  
 Tyler Ross Tyson  
 Albert Vagnozzi 1998  
 Nella Pauline Venella  
 Cheryl Sanson Whitcombe

**Bachelor of Arts**

Eleisha Abrams  
 Matthew Daniel Joseph  
 Anderton  
 Craig Kenneth Andrews  
 Karen A. Angelucci  
 Elizabeth Ann Ashworth  
 Michael Thomas Bauer  
 Matthew N. Berger  
 Jude Stephen Blessington  
 Dede Harris Boies  
 Michael James Brennan  
 James P. Brett  
 Kelley Lynn Brewer  
 Amy Marie Brown  
 Harold L. Carmean II  
 Amanda Elizabeth Chiampi  
 Sean Metrice Clayton  
 Dirk J. Cleveland  
 Jacqueline Theresa Colvin  
 Shawna Lynn Connor  
 Ryan Anthony Costello  
 Francine Theresa Cunniffe  
 Shannon D. DeCosta  
 Tracy A. DiSanto  
 Keith M. D'Oria  
 Joanna M. Doyle  
 Heather Jean Durkin  
 Brian E. Ebersole  
 Jaime Alden Farrington  
 Jesse Federman  
 Melissa L. Forbes  
 Gregory M. Fry  
 Daniel J. Gedrich  
 Erin Lee Ginsberg  
 Michael C. Gordon  
 Melissa J. Grafe  
 Stephen T. Graham  
 Joel Adam Guidry  
 Paul Andrew Guidry

## URSINUS COLLEGE CATALOG

Jannelle Hackman  
 Karen Jennifer Hahn  
 George Zachariah Hankins  
 Carolyn A. Harfman  
 Grete Hart  
 Carrie A. Haslbeck  
 Brian Michael Havrilla  
 Amanda M. Hektor  
 Michael Joseph Hennessey  
 Margaret Mary Hepp  
 Ericka C. Hill  
 Aaron Burke Hoffman  
 Michael S. Hoffman  
 Karen Michele Hollinger  
 Kimberly D. Hoover  
 Yalonda Evette Houston  
 Samuel S. Hwang  
 David M. Iannucci  
 Kimberly Dawn Inglot  
 Nicole Joyce Jacobson  
 Jason Aaron Joyce  
 Christopher Scott Kanuck  
 Jenna S. Katits  
 Diane Keller  
 Gregory Klein  
 Matthew H. Klinger  
 Patrick Jon Kurtas  
 Elizabeth M. Lamer  
 Henry J. Lanzalotti  
 Jon A. Leshner  
 Heather Elyse Levin  
 Stephen Thomas Lind  
 Jonathan Ross Martus  
 Kelly Lynn McCarthy  
 Heather D. McDowell  
 Thorin Patrick McGee  
 Kevin Vincent McIlhenny  
 Patrick J. McKenna  
 Benjamin T. Mills  
 Louis A. Mincarelli  
 Emily Susanna Morikawa  
 Ellen Jane Mueller  
 Louis P. Nemphos  
 Stephanie Emma Nestore  
 Ryan Bruce Nicholl  
 Anthony J. Palladino  
 Stephanie E. Palmer  
 Andrew M. Paparella  
 Rachele Marie Pecovsky '98  
 Darko Petrovic  
 Jodie M. Poth  
 Eric Robert Proccacini  
 Robert Andrew Rankl  
 Arathi Kandula Reddy  
 Jimmy Reilly  
 Joyce Gail Richardson '98

Mary Ann Robbins  
 James P. Rossiter  
 Kassandra Mernell Rousseau  
 Jason W. Rugg  
 Heather Cox Schmoeyer  
 Megha Shah  
 Brandon M. Shepherdson  
 John Allen Shoen  
 David M. Sobrinski  
 Janine K. Soper  
 Shaun D. Sowers  
 William J. Stephani  
 David Li-Kwong Tam  
 Daniel Vieira Tavares  
 Rebecca L. Thomas  
 Michael J. Traud  
 Eric Daniel Trimmer  
 Drew A. Vagnoni  
 Keith L. Ware Jr.  
 Sarah Ann Welsh  
 Jennifer Adele Zwilling

### **Bachelor of Science**

Jamie Ahl  
 Uriah Albrink  
 Suzanne Michelle Alexander  
 Kimberly N. Algayer  
 Ernest J. Anastasi Jr.  
 Donald W. Asper  
 Joseph M. Audiino  
 Roy Anthony Aumiller  
 Benjamin C. Baehr  
 Kevin R. Bailey  
 Melissa Cathryn Baldigo  
 Elizabeth A. Baran  
 Laurie Christine Barilotti  
 Andrew T. Bauer  
 Tricia Michele Beatty  
 Mark Alan Brenneman  
 Laura Alexandra Brouse  
 Kortny A. Bushman  
 Pdraic Michael Callahan  
 Candice E. Capstick  
 Karey R. Carlson  
 Robert Philip Cerrone  
 Pavel Y. Chernak  
 Ravi Jayendra Chokshi  
 Joseph A. Cusella  
 Anthony Andrew DeCarolis  
 Jennifer Lynn deRuyter  
 Marc DiFilippo  
 Michael Joseph DiFrancesca  
 Michael D. DiGiantomasso  
 Najah I. DiPaolo-Brown  
 Kelly Alison Donohue  
 Christine M. Drammissi

Jamie Leigh Eissler  
 Michelle L. Fanelle  
 Kristi Ann Ford  
 Jason S. Forsell  
 Snehal V. Gandhi  
 Rajeev Raghunandan Gowda  
 Jennifer B. Grace  
 Jillian Rachel Grau  
 Andrew J. Gray  
 Kristen Marie Griffin  
 Nicholas Grimaldi, Jr.  
 Michelle L. Grubby  
 Thomas F. Haberbusch  
 Erica D. Heil  
 Jennifer L. Herbst  
 Jeremy Andrew Hiatt  
 Jacquelyn Marie Hickey  
 Aimee Elizabeth Hillegas  
 Beth Ann Holloway  
 Michael Holwell  
 Ryan Olijnyk Hopkins  
 Pamela Leigh Hufner  
 Juliet Mae Hutcheson  
 Anthony J. Iuvone  
 Saramati Jayaraman  
 Malikah Nicole Jenkins  
 Laura L. Jessup  
 Sunitha Sara John  
 Amanda F. Johnson  
 Erika Johnston  
 Daniel C. Jones  
 Jason A. Jones  
 Charles V. Karns  
 Deirdre Lynn Kasper  
 Shannon Marie Kendzior  
 JoAnne Elizabeth Patricia Kenney  
 Christine A. Kenny  
 Barry Robert Keppard  
 Lisa Kilgarriff  
 Lynn Ellen Knothe  
 Samuel G. Ko  
 Brian J. Kuklinski  
 Erin Kathleen Kupstas  
 Danielle Erin Lann  
 Lori B. Lasco  
 Jennifer Lattanze  
 Denise Marie Lemek  
 Danielle L. Letting  
 Mary E. Love  
 Kimberly Elizabeth Madden  
 Jennifer Elizabeth Mahoney  
 Thomas J. Malia  
 Marjoe Marcelus  
 Jeffrey B. Martin  
 Nicole Vickers-Matz

Keith Russel Maurer  
 Anthony A. Mazzarulli  
 Sean C. McCoy  
 Nathaniel R. McElhaney  
 Jason D. McElwee  
 Jennifer M. McGee  
 Michael P. McIlhinney  
 Kerrie Nicole McKinney  
 Brandace J. McLachlan  
 Marissa Catherine Meehan  
 Craig D. Messick  
 Amie Yvette Miklavcic  
 Geoffrey David Mills  
 Laura Marie Morse  
 Edward R. Motzer  
 Jason R. Moyer  
 Kelly Sue Much  
 Michael Phillip Muir  
 Angela C. Mullan  
 Tricia A. Murnane  
 Tyffany D. Neiheiser  
 Anthony J. O'Hara Jr.  
 Amy Ingrid Olsen  
 Eric J. Oschell  
 Kartic Padmanabhan  
 Susan Elizabeth Pauley

Brian James Peck  
 Bryan A. Perry  
 Carolyn Peters  
 Robin E. Pyle  
 Kimberly Lynn Reese  
 Thomas D. Regan  
 Kathleen Clo Reynolds  
 Clifton Jamal Richie  
 Lauren E. Riggi  
 Catherine Anne Riley  
 Joseph Matthew Ruggiero  
 Richard Emil Sappe  
 Lori A. Schmid  
 Michael Roy Schultz  
 Lauren Marie Schuster  
 Matthew Z. Schwartz  
 John M. Sears  
 Teshome Sebhatu  
 Jeevan S. Sekhar  
 Devon Joseph Shedlock  
 John Edward Shilling  
 Kelly Elizabeth Shinn 1998  
 Danielle Lorraine Simonin  
 Preston Alan Stanton  
 Gretchen Marie Stormes  
 Leslie Erin Strausbaugh

Brian R. Strohecker  
 Sabrina E. Talotta  
 Laura K. Thomas  
 Lesli Kaaryn Thomas  
 Tarika Shareen Tiggett  
 Meghan Jaye Tintle  
 Katie E. Tuffey  
 Aldona A. Vainius  
 Adam K. van der Swaagh  
 Denise Marie Velez  
 Lauren Marie Wagman  
 Jeremy A. Walton  
 Jereme C. Wehr  
 Serena Roxann Weinberg  
 Russell Stafford Whelan  
 Monique Y. Whiting  
 Lorin Rebecca Wilson  
 Patricia Ann Winward  
 Ronald J. Withelder Jr.  
 Laurence Michael Wood  
 Wm. Scott Woodward  
 Alyson Lauren Yeager  
 Buffy Michelle Young  
 Mary Elizabeth Zanotti  
 Evan James Zoog

**HONORARY DEGREES CONFERRED AT 1999 COMMENCEMENT:**

**Commencement speaker:**

**Brain M. Lamb**, Founder and CEO of C-Span, *Doctor of Humane Letters*

**Baccalaureate speaker:**

**Henry Stark Wright**, Pastor, Cornerstone Baptist Church, Brooklyn, N.Y., *Doctor of Divinity*

**Joseph M. DeSimone**, 1986, Mary Ann Smith Professor of Chemistry at the University of North Carolina at Chapel Hill, *Doctor of Science*

**Lt. Gen. Raymond B. Furlong**, 1948, former commander of Air University, *Doctor of Law*

**Marilyn S. Lewis**, community volunteer, member of Board of Trustees, *Doctor of Humane Letters*

**Honorary Degrees conferred Oct. 20, 1999 at symposium celebrating the 10th anniversary of the Berman Museum Art, "The Transforming Power of Art:"**

**Nancy Berman**, director of the Hebrew Union College Skirball Museum, *Doctor of Humane Letters*

**J. Carter Brown**, director emeritus of the National Gallery of Art, *Doctor of Humane Letters*

# URSINUS COLLEGE CATALOG

## ACADEMIC CALENDAR 2000-2001

### August 2000

August 24	H	FAC Conference Freshmen Check-In
August 25	F	UDAC
August 27	Su	Upper Classes Check-In
August 28	M	Fall Semester Begins

### September 2000

September 4	M	Labor Day (Classes Held)
September 8	F	Last Day to Add Classes
September 23	Sa	Family Day (WMC)

### October 2000

October 7	Sa	Homecoming (JHU)
October 13	F	Mid Semester Grades Due Fall Holiday Begins (after classes)
October 14-17	Sa-T	Fall Holiday
October 18	W	Classes Resume
October 27	F	Last Day to Drop Classes With a "W"
October 30	M	Spring Term Registration Begins

### November 2000

November 10	F	Spring Term Registration Ends
November 21	T	Thanksgiving Recess Begins (after classes)
November 22-26	W-Su	Thanksgiving Recess
November 27	M	Classes Resume

### December 2000

December 4-8	M-F	Students pick up Financial Aid Packets from Student Financ. Serv.
December 8	F	Last Day of Classes Last Day to Drop
December 9	Sa	Reading Day
December 11-16	M-Sa	Final Exams

### January 2001

January 15	M	Deadline Early Decision Freshmen Financial Aid Applic.
January 22	M	Spring Semester Begins

### February 2001

February 2	F	Last Day to Add
February 15	H	Deadline for Regular Decision Freshmen Financial Aid Applic.

### March 2001

March 9	F	Mid Semester Grades Due Spring Vacation Begins (after classes)
March 10-20	Sa-T	Spring Vacation for Day Students
March 12-18	M-Su	Spring Vacation for Center Students
March 21	W	Day Classes Resume
March 28	W	Last Day to Drop Classes With a "W"



# DIRECTORY

## April 2001

April 1	Su	Last Day for Upper Classes to File FAFSA Institution Verification Form for 2001-2002
April 2	M	Fall Semester Registration Begins
April 13	F	Fall Registration Ends

## May 2001

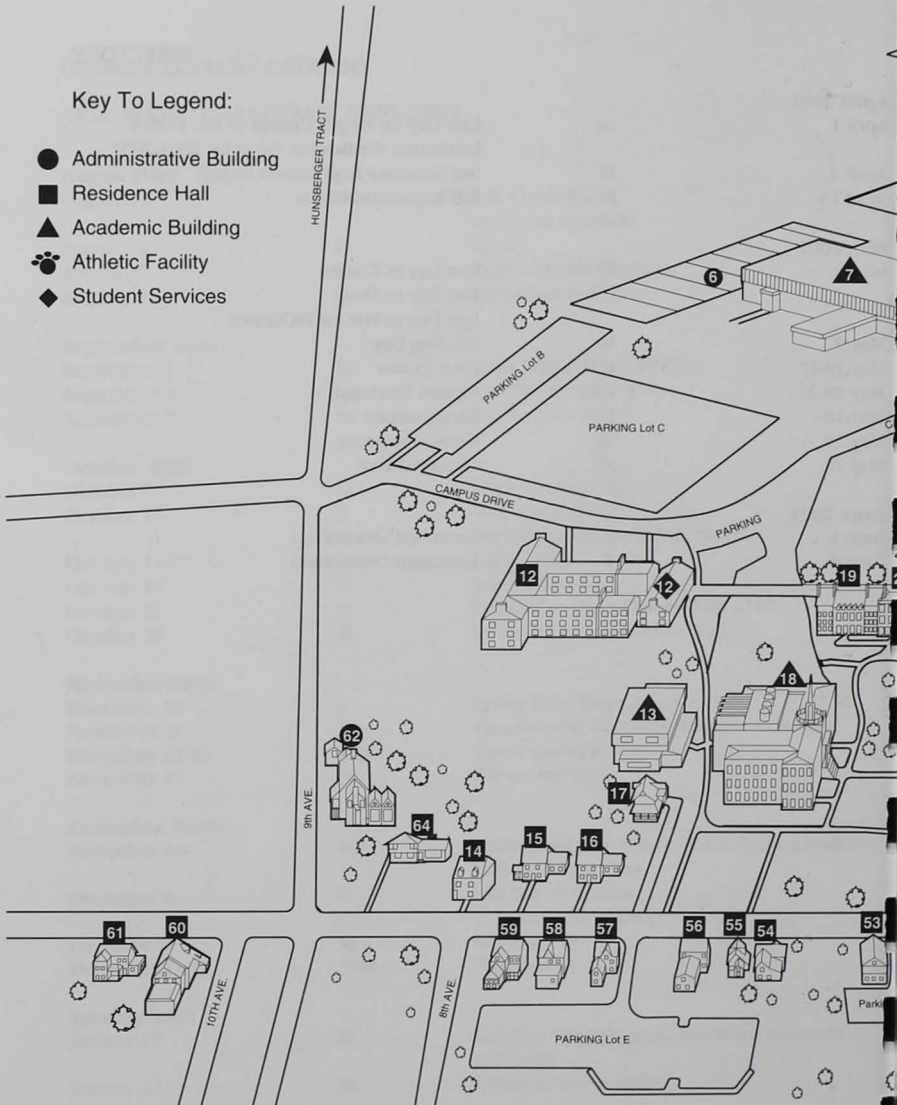
May 8	T	Last Day of Classes Last Day to Drop Last Day to File for PA Grants
May 9	W	Reading Day
May 10-17	H-H	Final Exams
May 18-20	F-Su	Alumni Weekend
May 18	F	Baccalaureate
May 19	Sa	Commencement
May 28	M	Memorial Day

## June 2001

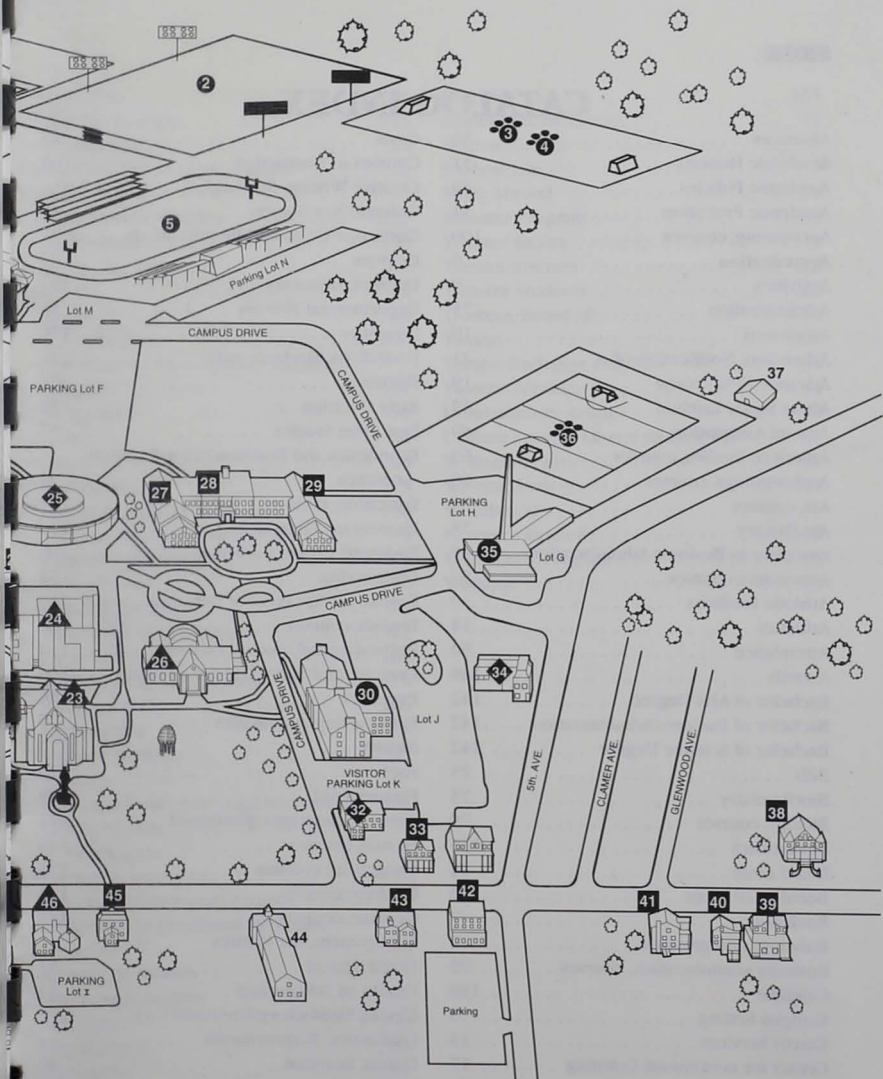
June 1	F	Freshmen Orientation
June 8	F	Freshmen Orientation

### Key To Legend:

- Administrative Building
- Residence Hall
- ▲ Academic Building
- ⚾ Athletic Facility
- ◆ Student Services



- |      |                            |      |                           |      |                           |
|------|----------------------------|------|---------------------------|------|---------------------------|
| ⚾ 8  | Baseball diamond           | 39   | 424/426 Main Street       | 43   | Maples Hall (520 Main)    |
| ▲ 27 | Beardwood Hall             | 40   | 444 Main Street           | 49   | Musser Hall (23 6th Ave.) |
| ▲ 26 | Berman Museum of Art       | 41   | 476 Main Street           | ▲ 22 | Myrin Library             |
| ▲ 23 | Bomberger Hall             | 42   | 500 Main Street           | 60   | 942 Main Street           |
| ▲ 11 | Bookstore                  | ▲ 33 | 503/505 Main Street       | 61   | 944 Main Street           |
| ▲ 21 | Brodbeck Hall              | ▲ 7  | Helferich Hall            | 54   | Olevian Hall (640 Main)   |
| ▲ 38 | Clamer Hall (409 Main)     | ▲ 47 | Hobson Hall (568 Main)    | ▲ 24 | F.W. Olin Hall            |
| 64   | Cloake House               | ⚾ 36 | Hockey Field              | ▲ 17 | Omwake Hall (701 Main)    |
| 30   | Corson Hall                | 14   | Isenberg Hall (801 Main)  | 28   | Paisley Hall              |
| 19   | Curtis Hall                | 33   | Keigwin Hall (513 Main)   | ▲ 18 | Pfahler Hall              |
| 51   | Duryea Hall (612 Main)     | 3    | Lacrosse Field            | 2    | Physical Plant            |
| 31   | Eger Gateway               | 56   | Lynnewood Hall (702 Main) | 62   | Practice Field            |
| 15   | Elliot House               | 35   | Maintenance Building      | 12   | R-Glad House              |
| ▲ 46 | Fetterolf House (554 Main) |      |                           |      | Reimert Complex           |
| 6    | Field House Site           |      |                           |      |                           |
| 5    | Football Field             |      |                           |      |                           |



- |                               |                                      |
|-------------------------------|--------------------------------------|
| ▲ 10 Ritter Center            | ▲ 48 Sturgis Hall (26 6th Main)      |
| ▲ 55 Schaff Hall (646 Main)   | ▲ 45 Super House (542 Main)          |
| ▲ 12 Security Office          | ▲ 43 Thomas Hall                     |
| ▲ 53 624 Main Street          | ▲ 58 Todd Hall (724 Main)            |
| ▲ 59 732 Main Street          | ▲ 44 Trinity United Church of Christ |
| ▲ 16 777 Main Street          | ▲ 32 Unity House                     |
| ▲ 50 Shreiner Hall (600 Main) | ▲ 57 Wicks House                     |
| ▲ 4 Soccer Field              | ▲ 20 Wilkinson Hall                  |
| ▲ 4 Softball Field            | ▲ 25 Wismer Center                   |
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