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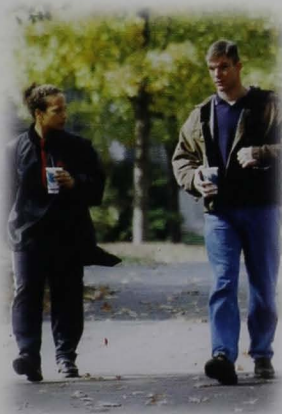
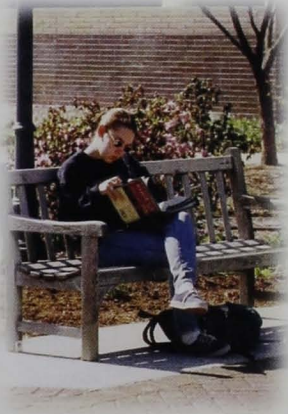
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URSINUS COLLEGE



Catalog 1999-2000

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April 1999

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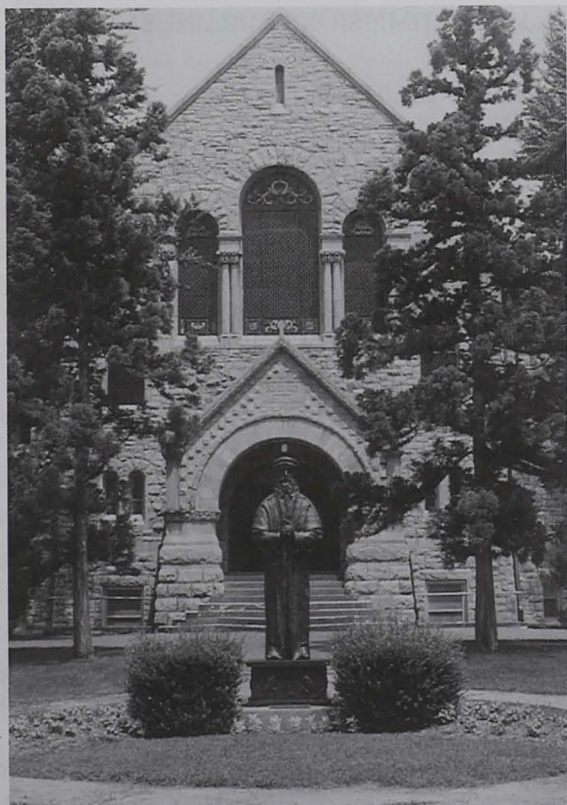
(Top right) A student studies on one of several benches near the Olin Hall humanities building, next to the Berman Museum of Art.

(Bottom right) Ted Xaras, professor of fine arts, shows Noriko Okabe, '98, how to capture a scene.

(Bottom left) Students stroll on the brick walkway and plaza, which links many of the campus buildings.

(Top left) Ara Brown, '00, describes his summer internship at a California treatment center for children and teens, arranged by Ursinus alumni Dr. Robert Crigler, '56, executive, director of the center

1999-2000 Course Catalog



URSINUS COLLEGE

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The College telephone number is (610) 409-3000. The FAX number is (610) 489-0627. 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 when the College is in session. The Office of Admissions is located in Corson Hall. To assure a satisfactory visit, applicants for admission should call or write for an appointment.

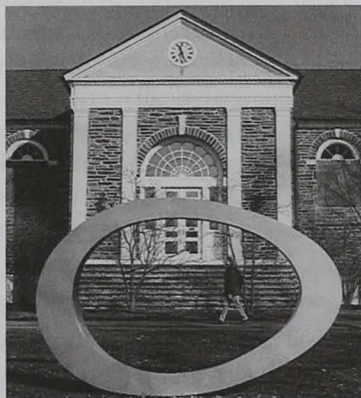
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The mission of Ursinus College is to enable students to become independent, responsible, and thoughtful individuals through a program of liberal education.

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

This is Ursinus



Ursinus College is a 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.

A leader in undergraduate research, Ursinus offers majors leading to a bachelor of arts or a bachelor of science degree in 21 major fields and 43 minor fields. The Ursinus liberal arts education teaches students to think critically across the disciplines and emphasizes student achievement. All departments require a capstone project. Students are encouraged to continue their research and interests during their academic career. At Ursinus, the educational program extends beyond the classroom, as faculty and staff continue to foster students' intellectual and creative talents throughout the College experience, especially as mentors for research and internships.

Educational Mission

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 society in an interdependent world.

The College seeks students of varied backgrounds who actively search for meaning and purpose in their lives. It nurtures a sense of community by engaging students and faculty in an unfinished conversation about liberal learning—how it is grounded in the fundamentals of human experience, broadens the mind, enhances compassion, and prepares us for a life of service.

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 should do as citizens, and how they best can appreciate the diversity and ambiguity of contemporary experience.

The faculty is the cornerstone of our academic program. Faculty members are dedicated to teaching and learning and set high standards for themselves and for students. They choose to be active scholars because they are involved teachers, transmitting their enthusiasm for learning to their students.

The faculty joins with the professional staff in an educational program that extends outside of the classroom. As a predominantly residential community, the College fosters a shared life and provides an opportunity for the comprehensive personal development of all students. By taking an active part in the varied programs of the campus, students have the opportunity to develop their intellectual, creative and physical talents, and to strengthen their personal values in the context of the principles and traditions of Ursinus.

The College adapts this mission of liberal education for full-time residential students to the special circumstances and program needs of part-time, non-resident students who enroll in the Ursinus College Center for Continuous Learning. By serving nearby communities through this program, the College plays a responsible part in the life of its region and shares its educational resources more widely.

Campus Environment

Ursinus' scenic, 160-acre campus, just 28 miles from Philadelphia, is part of the rich higher educational community of the greater Philadelphia region. Students have the advantages of living in a small town, yet have easy access to the varied cultural opportunities of an urban setting. Ursinus is located in the heart of a biotechnology research concentration.

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

College History

The College history dates back two centuries to a log schoolhouse and the former Freeland Seminary, a former Mennonite institution. The College's founders were members of the German Reformed Church who named the College for the distinguished 16th-century scholar Zacharias Ursinus of the University of Heidelberg, Germany. A state charter was granted in 1869, and women were first admitted to the College in 1880. Ursinus remains independent of, but voluntarily related to the United Church of Christ.

Today Ursinus enrolls an average of 1,200 full-time students of varied backgrounds, about equally divided between men and women. Traditional fulltime students are required to live in the residence halls if not living with parents, unless there is an exceptional circumstance. An evening program enables the College to play a responsible role in the life of the surrounding region, and to offer its resources for the particular needs of non-traditional students.

Accreditation

Ursinus is a member of the Association of American Colleges 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.

Ursinus College At a Glance

Character: Independent liberal arts

Founded: 1869 by members of the German Reformed Church

Location: Collegeville, Pa., 28 miles northwest of Philadelphia

Enrollment: 1,200 students; 1,060 part-time, evening

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

SAT Scores: 1100-1300

Class Rank: 46 percent are in the top tenth of their high school class

Faculty: 117 faculty members, 92 percent hold Ph.D. or highest degree in their field

Student/Faculty Ratio: 12:1

Campus: 160 acres, 59 buildings

Residential character: Almost all students live on campus, half in traditional residence halls, half in smaller houses in the Victorian Residential Village; Special interest housing available

Academic calendar: Two, 15-week semesters

Courses offered: 21 majors, 43 minors

Academic environment: 14 prestigious honor societies including Phi Beta Kappa

Student Organizations: More than 50 clubs, organizations and interest groups, as well as 16 sororities and fraternities

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 and England.

Community Service: Chaplain's Office sponsors varied opportunities

Athletics and recreation: NCAA Division III intercollegiate program with the Centennial Conference, a group of select liberal arts colleges; strong participation in intramurals; Women's field hockey in Patriot League

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; dorms and buildings are wired for computer, telephone, Internet and cable television access

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

Financial aid: Some 75 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>

Campus Life



Ursinus emphasizes the quality of student life for both resident and commuting students with the objective of helping each student grow 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. 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.

Student Life

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 participate in a number of cultural, educational and recreational organizations. The primary source of funding for student activities is the student activities fee. The proceeds from this fee are allocated by the Activities Fee Allocation Committee (AFAC).

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 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.

Student organizations include the Alternative Spring Break Club, Brownback-Anders Pre-Medical Society, the Beardwood Chemical Society, the Bicycle Racing Club, the Biology Club, the Blue Note Jazz Society, the Student Chapter of the Association for Computing Machinery, the Communications Club, the Economics and Business Club, Escape Velocity Dance Theatre, Fencing Club, Film Society, the Forensics Society, Gaming Association, the German Club, Girl Scouts of America, the Haines-Barnard Pre-Legal Society, the International Experience Club, the Italian Cultural Society, the Japanese Club, Le Cercle Français, the Literary Society, the Musser Hall International Organization, the G. Leslie Omwake Education Club, Martial Arts Club, Ursinus College Outdoor Society, the Political Science Club, the Psychology Club, the Society of Physics Students, the Student Chapter of the Mathematical Association of America, the Spanish Club, Norristown State Mental Hospital Volunteer Program, Photography Club, Pre-Law Society, Residence Hall Association, Rugby Club, Sankofa Umoja Nia, Ski Club, Ursinus Table Tennis Association, Volleyball Club and Water Polo Club.

Religious organizations include the Fellowship of Christian Athletes, the Hillel organization, the Ursinus Christian Fellowship, the Newman Society and the Inter-Faith Outreach.

Other special interest organizations include Amnesty International, the College Republicans, the Gay and Lesbian Alliance, the Multicultural Student Union, the Organization of Commuting Students, the Students and Teachers Against Rape, the Students Right-to-Life, the Student

Voice for Choice, the Tri-Lambda, the Life-Long Learners and the Young Democrats.

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 the student musical organizations and provide professional musical leadership. The Meistersingers, a small choral ensemble open by audition, offers concerts on and off campus, including a one-week tour each year. 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.

There are numerous social organizations on the Ursinus campus. The fraternities are Alpha Phi Epsilon; Beta Sigma Lambda; Chi Rho Psi; Delta Mu Sigma; Delta Pi Sigma; Pi Omega Delta; Sigma Rho Lambda and Zeta Chi. The sororities are Alpha Sigma Nu; Kappa Delta Kappa; Omega Chi; Phi Alpha Psi, Tau Sigma Gamma, and Upsilon Phi Delta. Additionally, there is a fraternity with an emphasis on service and academics, Sigma Chi Delta. Representatives of these organizations serve on the Greek Presidents Council.

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 and art. It is written and edited by an all-student staff under the direction of a faculty adviser. It is published twice a year.

The Ruby, the Ursinus yearbook, is published by an all-student staff. It is a volume presenting an intimate pictorial account of the year's activities, not only of the senior class, but of the entire College.

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 1,100 students. Thirty residence halls and 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.

Ursinus students may apply to live in residence halls based on personal interests. Such theme housing includes residence halls for students interested in writing, international and multicultural activities, service, biology research, wellness, and art. Quiet halls, which implement a 24-hour quiet policy, are offered to men and women in both houses and large residence halls. Many Ursinus residence halls are part of the *Residential Village*, a group of Victorian-era homes remodeled into dormitories. 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 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.

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*, (named in memory of the late wife of William Elliott, a member of the Board of Directors); *Maples*, *Musser*, *Olevian*, *Omwake*, *Paisley*, *Reimert Complex*, *Schaff*, *Shreiner*, *Stauffer*, *Sturgis*, *Todd*, *Unity*, *Wilkinson*, *Zwingli*, and several additional residence halls with Main Street addresses.

Room and Meals

All resident students have the option to choose a 14-or 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 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 Super Salad and Pasta Bar, Grill Works, To Your Health, Hometown Cafe, Great Rotations Rotisserie and Deli Works. 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.

Religious Life

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. The Office of the Chaplain also coordinates community service activities and campus religious organizations including (but not limited to) the Fellowship of Christian Athletes, the Hillel organization, Ursinus Christian Fellowship, the Newman Society and Interfaith Outreach. Ursinus College was founded by members of the German Reformed Church, and today is voluntarily related to, but independent of, the United Church of Christ, a Mainline Protestant Denomination.

Multicultural Services

The Director of Multicultural Services plans and coordinates services and programs for traditionally underserved students populations to help ensure the successful completion of college. Support includes, but is not limited to academic and personal counseling, social and cultural activi-

ties, and leadership development. The director also serves as adviser to S.U.N. 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 as well as social activities are provided as one way of acclimating students to the Ursinus and Collegeville communities.

Tutorial Services

The Tutorial Services program, located in the Unity House, provides tutoring for Ursinus students as well as students in the Ursinus community. Ursinus students apply to become tutors. Students are matched with tutors who are proficient in specific subject areas.

Athletics

Ursinus College recognizes the physical, social, and moral benefits derived from athletic activity and offers a well-balanced sports program, open to all at both the intramural and intercollegiate levels. Athletics is but one part of the total educational program of the College. The athletics program supports and reflects the mission of the College: to enable students to become independent, responsible and thoughtful individuals through a program of liberal education. The College believes that participation in athletics should be a constructive experience in which the physical welfare of the student athlete is paramount. Consequently, the primary emphasis of the athletics program is placed on enhancing the personal development of the student athlete, through a broadly-based program of spirited competition. However, the College recognizes that winning is also a legitimate objective, when achieved in an ethical manner consistent with the College's stated mission; we strive for excellence in the classroom and we strive for excellence on the field of athletic endeavor.

Equal opportunities for participation in athletics are available for all men and women. Intercollegiate competition takes place in 10 sports for men and 11 sports for women. An extensive program of intramural sports is in operation; students are encouraged to participate. Coaches are educators and coaching is a specialized form of teaching student athletes the values of training, strategy, hard work, team work, vigorous competition, and winning and losing — all part of a sound educational

experience. In addition, courtesy and sportsmanship in participants and spectators alike are fostered. Student athletes at Ursinus College are subject to the same policies, procedures, and criteria as non-athletes, with respect to such matters as admissions standards, administration of financial aid, credit-granting, progress toward and achievement of academic degrees, and transfer.

Ursinus operates in full compliance with the rules and regulations of the National Collegiate Athletic Association, the Centennial Conference, the Patriot League, and other athletic conferences to which the College belongs. 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, badmitten, 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.

The Campus Setting

The attractive campus provides an ideal setting for liberal education. The campus is organized around a graceful plaza and brick walkway linking three buildings central to the College's mission — Myrin Library, F.W. Olin Hall, and Wismer Center. Together, these buildings represent the interaction of academic and social life at the College. The plaza also provides numerous places where students and faculty can pause for discussions with one another.

Notable buildings on campus include the following:

F.W. Olin Hall, dedicated in 1990 and funded entirely by a grant from the F.W. Olin Foundation, 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.

Wismer 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 refurbished in 1997 and includes an important bas-relief honoring the classes from the War Years. A new, 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.

Bomberger Memorial Hall houses classrooms, computer lab, and the offices of the departments of economics and business administration, anthropology and sociology, career services, campus chaplain, 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: 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. Pfahler Hall fosters collaborative teaching and learning in the sciences. Named in honor of Dr. George E. Pfahler, famed radiologist, Pfahler Hall is where Dr. 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. 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 and handball courts. 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. Helfferich Hall is supplemented by the Utility Gym, located nearby and used for both athletic and social events. A new College field house is planned as a facility for intramural competition and intercollegiate teams.

Ritter Center for the Dramatic Arts opened in 1980 and houses a 260-seat 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. It occupies the former Thompson-Gay Gymnasium, built in 1927. The memory of the namesakes is specially preserved in the building. They were Robert W. Thompson, '12, and George H. Gay, '13, noted Ursinus athletes, both of whom died in their senior year of college.

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.

Eight tennis courts and an outdoor shuffleboard court are located behind Helfferich Hall.

Other campus structures include the Eger Gateway, erected at the entrance of the walk leading from Main Street to Myrin Library and provided through the generosity of George P. Eger of Reading, Pa.; and

the statue of Zacharias Ursinus in front of Bomberger Hall, donated by Philip and Muriel Berman and sculpted by Michael Price.

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.

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.

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.

Computing Resources

At Ursinus College

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.

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 cooper-

ates 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.

Admission



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 \$30 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.)

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 guid-

ance 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.

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

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.

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.

Special Program for High School Students and Senior Citizens

Ursinus College has established a program for area high school students and senior citizens (defined as 62 years of age or older). Further information may be obtained from the Admissions Office.

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.

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.

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.

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.

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.*

College Level Examination Program (CLEP)

Another means by which incoming students may earn advanced credit is through the College Level Examination Program (CLEP). These are examinations offered by the College Board as a means by which colleges may offer credit to students who have completed the equivalent of specified college courses through special experience or study. Ursinus College offers credit only in the subject examinations and not in the general examinations. The examinations are given at centers throughout the country. Interested applicants should write for a *CLEP Bulletin of Information for Candidates* to the Program Director, College Level Examination Program, Box 1821, Princeton, N.J. 08540.

Readmission (see page 64).

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.

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 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.

Part-Time Students

Commuting students who are candidates for a degree and who wish to pursue fewer than 12 hours of work are classified as part-time 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.

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.

Center for Continuous Learning

Ursinus extends its outreach to nontraditional students by means of a continuing education program that is in harmony with the College's

mission of liberal education, informed by the educational programs for traditional students, and responsive to the special needs of the people in its region. Courses are offered in fall, spring and summer sessions. Continuing education consists of evening degree programs, opportunities for adult students to complete degrees in the day, noncredit seminars and workshops, St. Joseph's University MS and MBA at Ursinus, and evening summer sessions.

The Ursinus College evening programs were begun in 1952. They make both single college courses and entire degree programs available to adults who are unable to pursue academic goals during traditional daytime hours. Evening programs enable a student to complete 64 semester hours of coursework leading to an associate's degree; 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.

The College provides counseling, support services, individualized academic advising and special tuition grants for qualified adult students seeking admission to both day and evening programs.

For information about credit and noncredit evening programs, address the Center for Continuous Learning, Ursinus College, P.O. Box 1000, Collegeville, Pa., 19426-1000.

Special note is made of the following continuing education programs:

Degree Programs: Degree programs offered entirely through evening courses are Associate in Business Administration and Bachelor of Business Administration, with majors in accounting, computer science, finance, human resources, management and marketing; Bachelor of Arts, with majors in communication studies and theatre, English, and history; and Bachelor of Science, with a major in psychology.

Evening students have the option of pursuing the Bachelor of Arts or Science degree in other major areas, but these programs involve taking some day courses.

Post-Baccalaureate Certificates of Professional Studies: The Certificate of Professional Studies is offered to college graduates holding the bach-

elor's degree or higher, who want to add specific organizational or business knowledge and skills. The certificate is available entirely at night in accounting, computer science, finance, human resources, management, and marketing areas of concentration, and consists of 32 to 35 hours of coursework, comprising a full new major at the bachelor's level.

Secondary Teacher Certification: Adults who have earned a bachelor's degree, or who are currently completing requirements for a bachelor's degree, may take secondary education courses as a minor concentration or as electives in their program. These students may also obtain secondary teacher certification through a traditional program of study, which includes a student-teaching experience to be scheduled during day hours.

Adults Taking Day Courses: Adults who meet the College entrance requirements may be admitted into day courses on either a part-time or full-time basis.

St. Joseph's University Master's Programs at Ursinus: Ursinus College has contracted with St. Joseph's University, Philadelphia, Pa., to provide instruction and support services for preparatory and graduate courses held on the Ursinus campus and leading to the MBA degree or the MS in Health Administration conferred by St. Joseph's.

Noncredit Programs: Varied noncredit workshops and seminars provide opportunities for members of the community at large to participate in evening and Saturday programs of short duration. These courses develop and enhance academic, professional and personal skills.

The College provides counseling, support services, individualized academic advising and special tuition grants for qualified adult students seeking admission to both day and evening programs.

For information about credit and noncredit evening learning opportunities, contact the Center for Continuous Learning at Ursinus College, P.O. Box 1000, Collegetown, Pa., 19426-1000.

Financial Information



TUITION, BOARD, FEES

Student Charges Per Year

Basic student charges at Ursinus College include tuition, room and board for resident students, activities fee, and a health and wellness fee. To help meet these charges, a student is advised to consult the Student Financial Services Office, which administers a comprehensive program of aid from Federal, state, Ursinus College and other private sources. Approximately 75 percent of all students receive some form of assistance in paying tuition and fees.

For 1999-2000, the following rates apply for full-time students: tuition, \$19,950; room and board, \$5,970; activities fee, \$170; wellness fee, \$110. Special and part-time students are charged at the rate of \$685 per credit, day program; and \$800, evening program, per three- or four-credit course. If registered for 12 or more hours in day courses, students 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, and one-half of the activities and wellness fees. The second half of the charges are due in January.

Billings are presented semiannually and are due for payment no later than the date indicated on the billing. 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. For additional information, see page 41. *These arrangements should be made early enough to assure payment of bills no later than the date indicated on the billing.*

Explanation of Charges

Application Fee: A fee of \$30 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.

Fee for Tuition: Covers classroom instruction, use of libraries, gymnasium and campus facilities. 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.

Activities Fee: Is charged to all full-time students, and to all special and part-time students enrolled for nine or more semester hours of credit. This fee supports the programs of the Campus Activities Board, and

activities approved by the Activities Fee Allocation Committee. It also covers subscription to *The Grizzly*, admission without further charge to all Ursinus athletic contests at the College, and use of College athletic facilities as scheduled.

Wellness Fee: Covers routine physician and nursing services, both on campus and in a local physician's office. In addition, a Wellness Coordinator assists students in obtaining medical care and in learning about health and wellness.

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.

Science Major Fee: A fee of \$125 per semester is charged all students majoring in biology, chemistry, physics, pre-engineering and freshmen who are enrolled in undesignated natural science.

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.

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.

Outstanding Balance	Fee
\$ 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 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.

The Higher Education Amendments of 1992 require the College to communicate to you how refunds are determined for students who receive Title IV aid (PELL, SEOG, Perkins and Stafford Loans). Refunds are computed differently, depending upon whether the student has Title IV financial aid and is attending for the first time or returning to Ursinus. A chart is used to determine the type of refund calculation to be used in each refund circumstance.

After the refund type has been determined, the percentage is selected from this table based on the week of withdrawal:

Week #	Pro-rata Refund	Federal Refund	Ursinus Refund*
1	90%	90%	87.5%
2	80%	90%	75.5%
3	80%	50%	62.5%
4	70%	50%	50.5%
5	60%	25%	37.5%
6	60%	25%	25.5%
7	50%	25%	12.5%
8	40%	00%	00.5%
9	40%	00%	00.5%
10	00%	00%	00.5%

*These percentages refer to tuition and fees charges. 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.

First Time Students:

In the event of a withdrawal by a first-time student with Title IV aid, Ursinus College provides a pro-rata refund of not less than that portion of the tuition, fees, room and board, and other charges assessed equal to the portion of the period of enrollment for which the student has been charged that remain on the last day of attendance by the student up to the 60% point of the semester. Ursinus College determines the amount of refund which would result from each of the three calculations shown, compares the results and refunds the largest amount.

Returning Students:

For returning students with Title IV aid, Ursinus College determines the amount of refund that would result from the Federal and Ursinus calculations, compares the results and refunds the largest amount.

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 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 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 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 \$16 million for 1998-99. Of the entire student body, approximately 75 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 \$7,500 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 1998-99 was \$3,000.

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 is currently \$2,900, 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. Applications are available at participating banks and other lending institutions and must be renewed annually. 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.

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. Requests for tuition remission by children of faculty members of member institutions 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 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.

However, if a student completing the sophomore or junior year has below the required yearly grade average and is permitted to remain at Ursinus, his or her Ursinus funds may be reduced by 10 percent for the following academic year. Whenever possible, this reduction in funds may be compensated for by an increase in loan or campus job earnings.

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 noncredit 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

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.

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 21 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 following: 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)
- 1 math -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 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
- Biology
- Chemistry
- Classics
- Communication Studies and Theatre
- Computer Science
- East Asian Studies
- Economics & Business Administration
- English
- 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.

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.

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.

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	Pennsylvania German Studies
Administration	Philosophy
Chemistry	Physics
Coaching	Politics
Communication Studies	Psychology
Computer Science	Religion
Creative Writing	Secondary Education
East Asian Studies	Sociology
Economic	Spanish
Elementary Educations	Statistics
English	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.

INDEPENDENT LEARNING EXPERIENCE

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

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.

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 Evening Program.)

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 four degrees: Associate in Business Administration (obtainable through evening program only), Bachelor of Arts, Bachelor of Science, and Bachelor of Business Administration (evening program only). For specific requirements of the curricula leading to each of these degrees, see departmental requirements and the catalog of the Center for Continuous Education. 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 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:

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 can-

didacy 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 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 1997-98.

Distinguished Honors

Anthropology: Jennifer Lynne Calhoun, "The Amish Quilt: Finding Creativity in Conformity," Adviser: Thomas Gallagher

Biochemistry: Isis Shanbaky, "Analysis of HF2 Phage Receptor of *Halorubrum coriense*," Advisers: Eric J. Williamsen, Anthony Lobo

Biology: Heather Ann Iocca, "The Inhibitory Effect and Mechanism of Action of the Cytokine Transforming Growth Factor beta-1 on the Proliferation of Airway Smooth Muscle Cells," Adviser: James Noveral

Biology: Brian Craig Jameson, "Sex and Seasonal Variation in the Chemosensory Structures of the North American Gray Squirrel,"

Adviser: Ellen M. Dawley

Biology: Daniel G. Kiefer, "The Association of Certain Malignant Tumors and Serum Levels of the Protein Progesterone Induced Blocking Factor (PIBF) Secreted by T-Lymphocytes," Adviser: Ellen M. Dawley

Biology: Jessica Beth Krupnick, "Characterization of Marine Vibrio Bacteria Using Metabolic and Genetic Techniques," Adviser: James W. Sidie

Chemistry: Monica I. Jushchyshyn, "Construction of an Apparatus to Optically Polarize Xenon for Investigation of Anesthesia," Adviser: Holly C. Gaede

Chemistry: Stephanie M. Piraino, "Characterization of a Cholesteryl 10-Undecenoate Liquid Crystal Stationary Phase for HPLC," Adviser: Eric Williamsen

Chemistry: Joseph J. Romano, "The Synthesis, Bromination, and Catalytic Hydrogenation of p-Alkoxyphenylketene Trimers," Adviser: Ronald Hess

Chemistry: Melvin D. Schursky, "Synthesis and Reactivity of 4-Bromophenylketene Trimer," Adviser: Ronald Hess

Chemistry: Linda Huong Tran, "Determination of Association Constants in Cyclodextrin Inclusion Complexes Using NMR Spectroscopy," Adviser: Holly C. Gaede

Communication Studies & Theatre: Lauren A. Steffen, "The Burke String Band A Family of Happy Losers," Adviser: Jay Miller

East Asian Studies: Hera S. Walker, "Tinker, Trickster, Soldier: A Look at the Origins of the Monkey Hero sun Wukong," Adviser: Hugh Clark

EcBa: Lawrence M. Santucci, "Modeling the Determinants of Attrition and Retention at Ursinus College: The Freshman and Sophomore Years," Adviser: Heather M. O'Neill

Education: Colleen Marie Maloney, "Incorporating Whole Language Into Speech Pathology in an Elementary School," Adviser: Pat Gross

English: Joseph Michael Catalfano, "Taking in the Trash: the Education Potential of Popular Fiction," Adviser: Joyce Lionarons

English: Brian M. Hamrick, "Stage Direction A Novella with addendum describing evolution and influences," Adviser: Jon Volkmer

English: Jared R. Rakes, "Supplementing a Lack: Scientific Historical Figures in Contemporary American Fictions," Adviser: Margot Kelly

English: Taneille Marie Smith, "Escaping "this Soft Eclipse": Emily Dickinson Performs Jane Eyre," Adviser: Patricia Schroeder

French: Tara J. Patenaude, "Le rôle d'Avignon dans la de la culture européenne," Advisers: Colette Hall and Annette Lucas

French: Jessica Lynne Haldeman, "L'Universite, est-ell vraiment une usine a chomeurs?" Adviser: Frances Novack

History: Jon Swearer, "The Importance of the Interaction Between Native American Culture and White Economic Desires in the Stories of the Tlingit and Sioux Indians," Adviser: C. Dallett Hemphill

Math and Comp Science: Jill Renee Schweitzer, "Factorization and Primality Testing," Adviser: Jeff Neslen

Math and Comp Science: Tracey Lynn Zeiler, "Cryptography," Adviser: Peter Jessup

Math and Comp Science: Scott Frederick Hofmann, "Genetic Algorithms: A Window into Evolutionary Programming," Adviser: Peter Jessup

Philosophy & Religion: Mark A. Pinsk, "Contemporary Perspectives on the Mind: A Philosophical Examination of the Scientific Study of the Mind and Brain," Adviser: Stewart Goetz

Physics: Dana M. Mastrovito, "Quantum Control of Molecular Processes in the K2 Molecule," Adviser: Doug Nagy

Politics: Christian C. Rice, "Patriotism Misguided: A Comparative Look at the German Neo-Nazi Movement and the American Militia Movement," Adviser: Steve Hood

Psychology: Meera M. Domingo, "Maternal Employment's Relationship to Attachment and Perceived Autonomy in Introverts and Extraverts," Adviser: Catherine Chambliss

Psychology: Matthew M. Doran, "The Variable Quality of Psychological Internet Resources: Sites Targeting Substance Abuse Problems, Emotional Disorders, and the Needs of Parents," Adviser: Catherine Chambliss

Psychology: Mark A. Pinsk, "A Functional MRI Study of Time Estimation Processes: Is the Cerebellum a Possible Internal Clock?" Adviser: Bruce Rideout

Psychology: Jamie Lyn Pontino, "Effects of a Gluten-Free Diet on rate of Learning in Autistic Children in an applied Behavioral Analysis Program: Summary Analysis," Adviser: Catherine Chambliss

Psychology: Gregory Edmund Urban, "The Effect of Romantic Involvement on Relationship Closeness in Mixed-Sex Dyads," Adviser: Bruce Rideout

Spanish: Heather Marie Arnold, "La retorica de Evita: palabras para los descamisados," Adviser: Douglas Cameron

Spanish: Keith David McCarty, "La representacion del espacio imaginario en Todos los fuegos el fuego de Julio Cortazar," Adviser: Douglas Cameron

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.

Sigma Xi: The national honorary fraternity for the recognition and encouragement of scientific research, was founded at Cornell University in 1886. The Society was incorporated in 1942. The Ursinus College Sigma Xi Club was installed on October 27, 1966. Election to the club is based on achievement in original research and is limited to juniors, seniors, and faculty.

Pi Gamma Mu: The national social science honorary society for the recognition of scholarship in the social sciences, was founded in 1924. It is affiliated with the American Association for the Advancement of Science. The Ursinus Chapter, Pennsylvania Sigma, was installed Jan. 1, 1950. Election to the society is based on academic achievement in the social sciences and limited to juniors and seniors.

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.

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.

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.

Additional Honor Societies

Other honorary societies are discipline-based. They include: *Alpha Psi Omega*, a 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; *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; *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.

ACADEMIC POLICIES

The Departmental System

The departmental system is employed in the organization and administration of instruction at Ursinus College. By this system, 20 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.

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 WF. Students who withdraw from a course without permission will receive a grade of F. A 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:

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.

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:

<u>grade</u>	<u>GPA</u>
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).

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.

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 Ursinus College Evening Division or in summer school at Ursinus.

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 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.

Summer Program

Ursinus students engage in research, internships and specialized courses normally not offered during the academic year. Students may consult with the Center for Continuous Learning for course offerings available.

Students wishing to take 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 Dean's Office. 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 official transcript to Ursinus.

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. Robin Clouser (Department of Modern Languages).

OFF-CAMPUS STUDY

Internships

An internship is a structured and supervised professional experience for which a student receives academic credit.

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
- 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

The Career Services Office has information on a wide range of internship opportunities.

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 pro-

grams 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. Fitzpatrick (Department of Politics).

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. Normally, only juniors are encouraged to apply for semester or year abroad programs, but qualified sophomores also may be recommended. 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. Students, whether language majors or not, 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. An examination covering the year's work may be required by the departmental chairperson upon the student's return. Information may be obtained from the study abroad adviser or advisers responsible for specific programs.

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.

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 summer program in **Mexico** takes place from late May to late June and includes a homestay in Cuernavaca and travel to Puebla, Mexico City, and another area of interest to the group, 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 or during the summer.

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.

Adviser: Dr. Shirley Eaton (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-week program that takes place in late May and early 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.

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

The Summer Program in **Germany** is held in Tübingen in southwestern Germany. Students study intensive language at the university, live in student residences and have the opportunity to enroll in a practicum or internship. Excursions in the region are included. 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

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 Strassbourg

Ursinus College has a formal agreement with the Hood College program in Strassbourg. 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 Hall (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).

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. Shirley Eaton (Department of Modern Languages).

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 at the University of Seville. The Instituto provides weekly tutorials in addition to regularly scheduled classes. Students who do not have sufficient language preparation 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 are paired off with Spanish university students of their same age to provide further integration into Spanish life.

Adviser: 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 normally conducted in English and are open to students from all majors.

The Organization for Tropical Studies (OTS) in Costa Rica offers an integrated 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.

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.

Summer School offerings are not announced in this catalog, but as far as possible, courses will be offered to meet the needs of students who register for the Summer School. 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, expressed in semester hours, is printed in italics. 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, *either* English 219 or 220, 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 321, 323, 325, 327, 328, 421; Politics 310, 321, 322, 324, 325, 330, 355, 418; English 222, 340 and the English seminar, if related to American literature; Philosophy 221; Sociology 227, 245, 263, 275; Music 104; Communication Studies and Theatre 105.

ANTHROPOLOGY AND SOCIOLOGY

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

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-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.

I. 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.]

ANTHROPOLOGY AND SOCIOLOGY

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 AND SOCIOLOGY

***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-400W. History and Theories of Anthropology and Sociology Dr. Gallagher and 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.*

**This course is not offered in 1999-2000.*

***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.

**This course is not offered in 1999-2000.*

ANTHROPOLOGY AND SOCIOLOGY

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 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-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: Anthropology 100, two 200-level anthropology courses, and written 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: A minimum of eight semester hours of 300- or 400-level courses 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.*

**This course is not offered in 1999-2000.*

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 Modern American 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

**This course is not offered in 1999-2000.*

ANTHROPOLOGY AND SOCIOLOGY

will analyze a number of these problems, including poverty, racial and ethnic discrimination, sexual discrimination, illness and medical care, the changing family, environmental crises, abortion, terrorism, and war. Prerequisite: None. Three hours per week. *Four semester hours.*

SOC-227-280 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, and at least one 200-level sociology course. 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: Any 100-level course in anthropology and sociology or written 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: A minimum of eight semester hours of 300- or 400-level courses and the 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.*

**This course is not offered in 1999-2000.*

ART

Professor Xaras (Chair); Assistant Professor Potter-Hennessey; Adjunct Professor Barnes, 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 semesters 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 tech-

niques 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**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 dark-room 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

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. 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. Barnes and 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.*

ASTRONOMY

See Physics and Astronomy

BIOLOGY

Professors Allen, Fields, Sidie, Small; *Associate Professors* E. Dawley (*co-Chairperson*), R. Dawley (*co-Chairperson*); *Assistant Professors* Bailey, Esch, Goddard, Lobo.

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

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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 111Q, 112Q and one of the following capstone courses: Biology 415W, 424W, 426W, 431W, 436W, 442W, 449W, 459W, 492W.
- II. *Distribution requirements:*
 - A. Molecular/Cellular Biology. At least two courses must be completed from the following: Biology 225, 226, 315, 332, 345, 426W, 431W, 436W, 449W, 459W.
 - 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, 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.

- 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 111Q, 112Q and at least 12 additional elective credits in biology, exclusive of internships or research.

Requirements for Minors in Biochemistry

A minor concentration in biochemistry consists of Biology 315 and Chemistry 309/309a, plus four additional courses chosen from the following: Biology 225, Biology 226, Biology 426W, Chemistry 310/310a, and Chemistry 313/314a.

Special Career Interests

- I. Students seeking admission to graduate programs in biologically related fields should note the following:
 1. A second year of chemistry is strongly recommended.
 2. A fifth course in chemistry is recommended.
 3. Mathematics/Computer Science 241, 242, 243 and 271 are recommended.
 4. 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:
 1. Physics 100 or 111Q is required; a year of physics is recommended.
 2. Geology 100 is required.
 3. Two mathematics courses are required from among Mathematics 111, 112, 241Q, 242, 243, 271.
 4. Chemistry 105/105a and a choice of 106/106a or 206/206a are required.
 5. It is highly recommended that prospective teachers serve at least one semester as departmental assistants.
 6. Dual certification in general science is highly recommended.
 7. The curriculum beyond the first year must be arranged in consultation with the chairman of the department of education or

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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:
1. Two years of chemistry and one year of general physics for science majors are required by all of the above schools.
 2. Many schools also require one full year of English and some specify one or two semesters of calculus.
 3. 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:
1. Mathematics 241, 242, and 271 are strongly recommended.
 2. Economics and Business Administration 100 and 105 are recommended.
 3. Additional coursework in communication arts is recommended.
 4. Additional coursework in English composition is recommended.

BIO-100Q. Introduction to Biology

Dr. Fields

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 may not enroll in Biology 100Q.

BIO-111Q. Principles of Biology: Organisms and Populations

Dr. Dawley

An introduction to the principal concepts underlying ecology, evolution, organismal diversity, and organismal structure and function. Field

and laboratory exercises emphasize independent investigation. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

BIO-112Q. Principles of Biology: Cells and Genes

Dr. Lobo, Esch

An introduction to the molecular basis of life and its perpetuation. Topics include elementary biochemistry, cellular organization and function, bioenergetics and genetics. Laboratory experiments cover aspects of molecular, cellular, and genetic biology. Prerequisite: Biology 111Q or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

NOTE: Biology 111Q, 112Q are the basic introductory courses required of all biology

majors and of any others who are planning to meet the various pre-professional requirements in the health sciences.

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 111Q 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-222 Vertebrate Biology Dr. Allen

A study of the fossil history and modern diversity, life styles and adaptations of modern vertebrate animals and their interactions with one another and with the environment. Prerequisites: Biology 111Q and 112Q or permission of the instructor. Three hours of lecture per week. *Four semester hours.*

BIO-225. Cell Biology Dr. Esch, 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 signalling and movement. Prerequisites: Biology 100Q, 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, socio-biology, genetics of behavior, and the evolution of behavior. Prerequisites: Biology 111Q and 112Q or 200; or permission of the instructor. Three hours of lecture per week. *Four 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. Prerequisite: 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 100Q or 111. 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 100Q or 111Q or permission of the instructor. Three hours of lecture and three hours of laboratory per week. *Four semester hours.*

BIOLOGY

BIO-306. Human Physiology Dr. Bailey

A study of the physiological processes that support the integrated functioning of the human body. Prerequisite: Biology 100Q or 112Q or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

BIO-315. Biochemistry Dr. Esch

The study of the properties, structure, synthesis and metabolism of nucleic acids, carbohydrates and proteins. Biological oxidations, enzyme catalysis, and the chemistry of selected physiological processes are also included. Prerequisites: Biology 112Q and Chemistry 106. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

BIO-320. Biology of Tropical Rain Forests

Dr. Dawley

A field study of Costa Rican rain forests. Topics include diversity and natural history of key plants and animals, ecological interactions and evolutionary processes, and conservation. May include side trips to cloud forests or coral reefs. Prerequisite: Permission of instructor; Biology 100Q or 111Q recommended. Field investigations accompanied by readings, lectures, and a directed research project. Course will meet 15 hours on campus and three weeks in the field. *Four semester hours.*

NOTE: This course will run during the January interim or during the summer.

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 physical and chemical oceanography, marine plants, zooplankton, nekton, marine animals, and the marine ecosystem. Prerequisite: Biology 100Q and 200, or Biology 111Q and 112Q, or permission of the instructor. Lecture and field investigations. (Course conducted in part at a marine field station.) *Four semester hours.*

BIO-332. Histology Staff

A study of the structure of vertebrate tissues and their integration into organs and organ systems. An introduction to histological technique.

Prerequisites: Biology 111Q and 112Q or permission of the instructor. Three hours of lecture; three hours of laboratory per week. *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. Prerequisites: Biology 111Q and 112Q. 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. Prerequisites: Biology 111Q and 112Q. 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. Prerequisites: Biology 111Q and 112Q; Chemistry 208. 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 111Q and 112Q. 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 physi-

ology, including the nervous, cardiovascular, respiratory, gastrointestinal and renal systems. The laboratory will emphasize cooperative problem-solving, experimental design, and independent investigation. Prerequisites: Biology 111Q and 112Q, Chemistry 105, 105a, 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 library review paper or directed research in an ongoing research project. Prerequisites: Biology 111Q, 112Q 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 111Q, 112Q 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 111Q, 112Q 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. This course fulfills the capstone, oral and writing requirements within the major. Prerequisites: Biology 111Q and 112Q, English 100, 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 processes of evolution, including population genetics, molecular evolution, the formation of new species, and evolutionary patterns of higher taxa through geologic time. The course will examine in detail the Neo-Darwinian theory of adaptation and natural selection as well as competing scientific explanations of evolutionary change. This course fulfills the capstone, oral and writing requirements within the major. Prerequisites: Biology 111Q and 112Q, English 100, or permission of the instructor. Three hours of lecture per week. *Four semester hours.*

BIO-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. This course fulfills the capstone, oral and writing requirements within the major. Prerequisites: Biology 111Q and 112Q, English 100, or permission of the instructor. Biology 226 is recommended. Three hours of lecture; three hours of laboratory per week. *Four semester hours.*

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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. This course fulfills the capstone, oral and writing requirements within the major. Prerequisites: Biology 111Q and 112Q, English 100, 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. This course fulfills the capstone, oral and writing requirements within the major. Prerequisite: Biology 226, English 100. 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. This course fulfills the capstone, oral and writing requirements within the major. Prerequisites: Biology 111Q and 112Q, English 100, 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. This course fulfills the capstone, oral and writing requirements within the major. Prerequisites: Biology 225, English 100 or permission of instructor. Biology 226 and 345 are 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 economic impact of human diseases such as yellow fever, and Ebola hemorrhagic fever, and important diseases of crops and agricultural animals. This course fulfills the capstone, oral, and writing requirements within the major. Prerequisite: Biology 225 and 226 and English 100 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 consent 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: English 100, junior or senior standing, written consent of a staff member who will serve as research adviser. *Four semester hours.*

BUSINESS ADMINISTRATION

See Economics and Business Administration

CHEMISTRY

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

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; Biology 111, 112, and 315.

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 may not receive credit for both Chemistry 105 and 111.

*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.*

A student may not receive credit for both Chemistry 105a and 111aQ.

CHEM-106. Organic Chemistry I Dr. Hess, Dr. Tortorelli

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.*

A student may not receive credit for both Chemistry 106 and 207.

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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 or 111aQ. Three hours per week. *One semester hour.*

A student may not receive credit for both Chemistry 106a and 207a.

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, 105, or 111. 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 NMR spectroscopy. This course must be taken concurrently with Chemistry 205a.* Prerequisite: Chemistry 106 or 207. 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 combination of 106a. This course must be taken concurrently with Chemistry 205.* Prerequisite: Chemistry 106a or 207a. Three hours per week. *One semester hour.*

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

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 or 111. Three hours per week. *Three semester hours.*

A student may not receive credit for both Chemistry 112 and 206.

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 or 111aQ. Three hours per week. *One semester hour.*

A student may not receive credit for both Chemistry 112a and 206aQ.

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 or 207. Corequisite: Chemistry 205 or 208 (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 or 207. Corequisite: Chemistry 205 or 208 (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 112 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 112 or 206; Math 112; Physics 112. Strongly recommended: Math 211. Three hours per week. *Three semester hours.*

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

Laboratory work related to Chemistry 309, emphasizing computer and writing skills. An introduction to the primary and secondary literature sources of physical chemistry. Prerequisites: Chemistry 209 (or concurrently) and 309 (or concurrently). 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 112 or 206. Recommended: Chemistry 211 and Physics 112. Four hours per week. *Four semester hours.*

A student who has received credit for both Chemistry 306 and 311 may not receive credit for Chemistry 313.

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 112a or 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 or 208, and 112 or 206, and permission of the instructor. Three hours per week. *Three semester hours.*

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 or 208a, and 112a or 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

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the work, written and oral reports must be presented to the department. Prerequisites: Chemistry 205a or 208a, and 112a or 206a, and written permission of the research adviser. Graded S/U. *Three semester hours.*

CHEM-391. Introduction to Research 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. Price**
Exercises in oral and written presentation of scientific material. This course culminates with the composition and presentation of a review paper. Prerequisites: Chemistry 205 or 208, 204 or 222, 309 (or concurrently), 306 or 311 or 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 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), 306 or 311 or 313, and 306a, 311a, or 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 112 or 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 or 208, 309, and 310 (or concurrently). Two hours per week. *Two semester hours.*

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 of 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 208a, 112a or 206a, and 306a or 309a or 311a 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.

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 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, 251; 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 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).

CLASSICS

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 justice 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.*

*This course is not offered in 1999-2000.

CLASSICS

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 Henry, Miller (*Chair*); *Associate Professor* Czubaroff; *Assistant Professor* Edwards; *Lecturers* Brand, Goldberg, Baratz Goodman.

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 39 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 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

Dr. Henry, 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. *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, 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.*

Students who have received credit for CA 203 may not receive credit for CST 105.

CST-110. Interpersonal Communication

Dr. Czubaroff, 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.*

Students who have received credit for CA 219 may not receive credit for CST 110.

CST-111. Introduction to Theatre

Dr. Henry

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.*

Students who have received credit for CA 111 may not receive credit for CST 111.

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

Dr. Czubaroff, Dr. Henry, Staff

The theory and practice of public speaking. The course includes an introduction to listening, communicative thinking, and speech analysis. Three hours per week. *Three semester hours.*

Students who have received credit for CA 100 may not receive credit for CST 201.

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 conducted in the college computer lab. Prerequisite Eng 100, CST 105 (or CA 203) or permission of instructor. Four hours per week. *Four semester hours.*

Students who have received credit for CA 207 may not receive credit for CST 207.

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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.*

Students who have received credit for CA 210 may not receive credit for CST 210.

CST-211. Shakespeare on Stage **Dr. Henry**

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.*

Students who have received credit for CA 211 may not receive credit for CST 211.

CST-222. Oral Interpretation **Dr. Henry**

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 CA 111) or permission of the instructor. Four hours per week. *Four semester hours.*

Students who have received credit for CA 222 may not receive credit for CST 222.

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.*

Students who have received credit for CA 309 may not receive credit for CST 240.

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 (or CA 203). 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 multi-media production techniques. Emphasis will be placed on newer computer-based technologies in use within the field. Prerequisite: CST 210 or CST 240 (or CA 210 or CA 309). Three hours of lecture and two hours of lab per week. *Four semester hours.*

CST-275. Argumentation and Debate

Dr. Czubaroff

A study of argumentation principles and processes with an emphasis on applying this knowledge in debate advocacy situations. At the end of the semester students plan and participate in a debate open to the college community. Prerequisite: CST 201 (or CA 100) or permission of instructor. Three hours per week. *Four semester hours.*

Students who have received credit for CA 345 may not receive credit for CST 275.

CST-277. Acting

Dr. Henry

An introduction to elementary acting techniques. Students participate in acting exercises, improvisation, and scene study. Prerequisites: CST 111, 211, or 222, (or CA 111, 211, or 222) or permission of the instructor. Four hours per week. *Four semester hours.*

Students who have received credit for CA 301 may not receive credit for CST 277.

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.*

Students who have received credit for CA 225 or ENG 225 may not receive credit for CST 280.

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 or CA 270W, major or minor in communication studies and theatre, a written project proposal, and permission of a communication studies faculty member to serve as advisor. Offered in the fall semester. *One semester hour.*

Students who have received credit for CA 298 may not receive credit for CST 298.

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.*

Students who have received credit for CA 299 may not receive credit for CST 299.

CST-311. History of Theatre**Dr. Henry**

A survey of the development of theatre, its literature, architecture, and artists, from the Greeks to the 20th century. Prerequisites: Junior standing, CST 111 (or CA 111), and one of the following: CST 211, 222, 277; or permission of the instructor. Three hours per week. *Four semester hours.*

Students who have received credit for CA 311 may not receive credit for CST 311.

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 or CA 219. Three hours per week. *Four semester hours.*

Students who have received credit for CA 325 may not receive credit for CST 325.

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 or CA 219. Three hours per week. *Four semester hours.*

Students who have received credit for CA 352 may not receive credit for CST 352.

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 or CA 203. Three hours per week. *Four semester hours.*

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 or 110. Three hours per week. *Four semester hours.*

Students who have received credit for CA 358 may not receive credit for CST 358.

CST-362. Media Criticism**Dr. Edwards**

A critical study of mass-mediated messages, including the issues of gender, ethnicity, vio-

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lence, and ideology. Prerequisite: CST 105 or CA 203. Three hours per week. *Four semester hours.*

Students who have received credit for CA 362 may not receive credit for CST 362.

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 or CA 203. 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 CA 203, or permission of the instructor. Three hours per week. *Four semester hours.*

Students who have received credit for CA 370 may not receive credit for CST 370.

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 CST 219 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 CA 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 adviser and an on-site supervisor. Includes periodic meetings with the faculty adviser and completion of an approved research project. Prerequisite: major or minor

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. *Three semester hours.*

CST-382. Internship

Dr. Miller

Content, prerequisites, and requirements are the same as CST 381. Offered in the spring semester. *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. *Four semester hours.*

CST-384. Internship

Dr. Miller

Content, prerequisites, and requirements are the same as CST 383. Offered in the spring semester. *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 Communication 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.*

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CST-392. Research in Communication Studies & Theatre Staff

Content, prerequisites, and requirements are the same as CST 391. Offered in spring semester. *Four semester hours.*

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.*

Students who have received credit for CA 411 may not receive credit for CST 411.

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.*

Students who have received credit for CA 412 may not receive credit for CST 412.

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 (or CA 270W); CST 201 (or CA 100); two advanced studies courses (CST 311 to CST 372 or CA 311 to CA 370). Three hours per week. *Four semester hours.*

Students who have received credit for CA 444W, CA445W, CA 447W may not receive credit for CST 450W.

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.*

COMPUTER SCIENCE

See Mathematics and Computer Science

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.

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

An 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 opportunity 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 independent 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, Harris (Chair), Assistant Professor McLennan, Instructor Phillips.

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 electives within the concentration 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 take four electives among an array of economics subjects and an economics and public policy capstone course. Independent research or an internship may fulfill one elective (four semester hours) in the major. In addition, majors must take either Math 105 or 111, or Math 107 and 108.

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 and 306. The capstone experience is fulfilled by EcBA 410W. In addition, two elec-

tives must be chosen from the following courses: 203, 204, 206, 301, 304, 309, 316, 326, and 381 or 391.

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 and 307. The capstone experience is fulfilled by EcBA 410W. In addition, two electives must be chosen from the following courses: 205, 306, 308, 326, 327, and 381 or 391.

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 and 305. The capstone experience is fulfilled by EcBA 420W. In addition, four electives must be chosen from the following courses: 308, 309, 316, 331, 332, 333, and 381 or 391.

The department advises students who plan to pursue graduate study in economics to consult with their advisor 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 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

Mr. Phillips

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 current management problems and practices. 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

ECONOMICS AND BUSINESS ADMINISTRATION

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 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 Mr. Phillips

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 postmodern 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: EcBA 305, 307. Three hours per week. *Four semester hours.*

ECBA-331. Economics of Environment and Natural Resources**Dr. McLennan**

Economic analysis is used to inform, analyze, evaluate, and assist current environmental and natural resource policy decisions. Analysis of environmental problems using cost-benefit or efficiency criteria. Topics may include externalities, public goods, common property rights, and sustainability. Independent written work required. Prerequisite: EcBA 251. 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**Mr. Phillips**

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.*

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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: 308, 309, 316, 331, 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, Saboe

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)	General Science (7-12)	Latin (K-12)
Chemistry (7-12)	German (K-12)	Mathematics (7-12)
English (7-12)	Health and Physical	Physics (7-12)
French (K-12)	Education (K-12)	Social Studies (7-12)
	Japanese (K-12)	Spanish (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 standing, 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 classroom 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

Mr. Saboe

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. Foundations 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-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, Ms. Florio**

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 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-451. Research**Staff**

This course comprises directed reading and research on a specific topic in education. Students wishing to register in this course present to the adviser for this research a proposal outlining the research to be conducted. The proposal must be approved by the adviser. At regular intervals during the semester, students submit progress outlines and meet with the adviser to discuss them. A final paper is required. *One semester hour.*

EDUC-452. Research

Same as Education 451, but offered in the spring semester.

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

EDUCATION/ENGLISH

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 DeCatur, Henry, Lionarons, Perreten, Schroeder, Wickersham; *Associate Professors* Dole (Chair), Kelley, Volkmer; *Assistant Professors (Visiting)* Keita, Osman; *Lecturers* Agostinelli, Bates.

Requirements for Majors

Majors must complete at least nine courses in English beyond English 100, including: 221W; any four of the sequence 215-220, including either 219 or 220; at least two 300-level courses; and a 400-level seminar or an honors paper. CST 207 may also be included in the major.

Students who are considering graduate study in English are strongly encouraged to take more than the minimum number of courses, including the entire 215-220 sequence.

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 321, or English 326; and either English 206, English 211, CST 222, English 309, English 310 or English 317. They are also strongly urged to complete the entire 215-220 sequence. 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 16 hours in English beyond English 100, including at least one literature course at the 300 or 400 level. At least two of the series 215-220 are strongly recommended.

A minor concentration in creative writing consists of English 302 plus at least three of the following writing courses: 205, 206, 208, 209 (one or more sections), or CST 207. 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-200. Introduction to Literature Staff
The course develops skills in reading, understanding, and appreciating literature with the aim of helping students read good literature for lifetime enjoyment. Themes and topics change each year. Not open to junior or senior English majors. English 200 does not count toward an English major or minor. Prerequisite: English 100 or permission of instructor. Four hours per week. *Four semester hours.*

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,
Dr. Osman, Ms. Keita
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. DeCatur
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
Dr. DeCatur, Dr. Henry
A comparative study of productions and interpretations of a selection of Shakespeare's comedies, histories, tragedies, and romances. Prerequisite: English 100. Three hours per week. *Four semester hours.*

NOTE: English majors will normally take English 309, 310; credit toward the major will be given only for any two of the courses English 309, 310, or 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.*

ENGL-215. Medieval and Renaissance Literature Dr. DeCatur,
Dr. Lionarons, Dr. Perreten
Includes Chaucer, Spenser, Shakespeare, and others, presented in historical context. Prerequisite: English 100. Four hours per week. *Four semester hours.*

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ENGL-216. 17th- and 18th-Century English Literature

Dr. DeCatur, Dr. Lionarons,
Dr. Perreten

Includes Milton, Dryden, Swift, Pope, and others, presented in historical context. Prerequisite: English 100. Four hours per week. *Four semester hours.*

ENGL-217. Romantic and Victorian Literature

Dr. Dole,
Dr. Perreten

Includes Wordsworth, Keats, Tennyson, and others, presented in historical context. Prerequisite: English 100. Four hours per week. *Four semester hours.*

ENGL-218. 20th-Century English Literature Dr. DeCatur, Dr. Dole, Dr. Perreten

Includes Joyce, Woolf, Eliot, and others, presented in historical context. Prerequisite: English 100. Four hours per week. *Four semester hours.*

ENGL-219. American Literature before 1900 Dr. Kelley, Dr. Schroeder

A survey of American literature from the beginning through Twain and James, with attention to minority and women writers as well as traditional figures. Prerequisite: English 100. Four hours per week. *Four semester hours.*

ENGL-220. 20th-Century American Literature Dr. Kelley, Dr. Schroeder

A survey of American literature from c. 1900 to the present, with attention to minority and women writers as well as traditional figures. Prerequisite: English 100. Four hours per week. *Four semester hours.*

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. Prerequisite: English 100 or equivalent. 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 Dr. DeCatur

Critical reading of representative works from Chinese literature in modern translations. This survey in a variety of genres begins with literature from the 12th c. B.C.E. and ends with modern Chinese literature. Three hours per week. *Four semester hours.*

ENGL-224. Japanese Literature in Translation Dr. DeCatur

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-228. Women's Literature Dr. Dole, Dr. Kelley, Dr. Lionarons

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.*

NOTE: Students who have taken English 318 will not receive credit for English 228.

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.

ENGL-300. Special Topics in English Staff

This course will focus on a specific topic in English studies not covered in any depth in other courses in the curriculum. Prerequisites: English 100, LSS 100. Three hours per week. *Four semester hours.*

*This course is not offered in 1999-2000.

ENGL-302. 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: English 205, 206, or 209, or permission of the instructor. Three hours per week. *Four semester hours.*

ENGL-309. Shakespeare and His Contemporaries
Dr. DeCatur, Dr. Henry

The reading of Shakespeare's principal history plays and comedies and the study of their background with supplemental plays written by his important contemporaries. Prerequisites: English 100; LS 100. Three hours per week. *Four semester hours.*

ENGL-310. Shakespeare and His Contemporaries
Dr. DeCatur, Dr. Henry

The reading of Shakespeare's principal tragedies and romances and the study of their background, with supplemental plays written by his important contemporaries. English 309 is not a prerequisite for 310. Prerequisites: English 100; LS 100. Three hours per week. *Four semester hours.*

***ENGL-317. Studies in Poetry**
Dr. Perreten, Dr. Volkmer

An in-depth examination of poetry and poetics in English. The course includes reading of primary and secondary sources, critical evaluation of poetry, and imitation of poetic forms. Prerequisite: English 221W. Three hours per week. *Four semester hours.*

ENGL-319. 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-320. 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-321. 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-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; LS 100. Three hours per week. *Four semester hours.*

ENGL-335. 20th-Century Drama
Dr. Henry, Dr. Schroeder

A study of the principal plays, playwrights, and dramatic movements of the 20th century, beginning with the revolution of Ibsen's realism through the emergence of women and black playwrights. Prerequisites: English 100; LS 100. Three hours per week. *Four semester hours.*

***ENGL-339. The British Novel** **Dr. Dole**
A study of British novels selected by theme, genre, or period. Prerequisites: English 100; LS 100. Three hours per week. *Four semester hours.*

ENGL-340. The Novel in America
Dr. Kelley, Dr. Schroeder

Study of selected American novels, arranged topically. Prerequisite: English 219 or 220 or consent of instructor. Three hours per week. *Four semester hours.*

ENGL-342. Contemporary Fiction
Dr. Kelley, Dr. Volkmer

A study of significant fictional works, trends, and innovations since World War II. Prerequisite: English 218 or English 220 or consent of instructor. Three hours per week. *Four semester hours.*

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

*This course is not offered in 1999-2000.

ENGLISH/EXERCISE AND SPORT SCIENCE

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-441 through 444. Seminar in Advanced Studies in Literature Staff

A study of a genre, a major figure, or a special topic. Prerequisites: English 221W; 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. *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.*

EXERCISE AND SPORT SCIENCE

Professors Borsdorf, Boyd, Davidson (*Chair*); *Associate Professors* Chlad, Wailgum; *Assistant Professor* Engstrom; *Lecturers* Dent, Guenther, Wright.

The department of exercise and sport science serves dual functions: (1) to provide for all students a diversified service program of activities, and (2) to offer to those students interested in majoring in the field comprehensive programs in exercise science, sports medicine, wellness, fitness health and physical education leading to graduate programs, teaching and other professional certifications. Included in the service program are classes in basic and advanced activities, organized intramural programs for men and women, and recreational facilities for use by all students in their leisure time.

The professional program is a four-year course of study, offering within the framework of a broad liberal arts education the opportunity to develop competencies in the many disciplines which make up the exercise and sport-science domain. Implicit in its objectives is the development of the total individual's knowledge, skills, habits and attitudes, the development of social and professional competencies, the growth of insight, independent thought, initiative and leadership, and the evolution of a dynamic ethical philosophy.

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 [CA 100].

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.

III. Athletic Training

A program of study recommended for those students interested in obtaining national certification in athletic training and pursuing a graduate program of study in athletic training or other allied health professions. The required courses are ESS 232W, 278, 378, 478W, 487, 488; PSYC-100; and BIO-305 and 306.

Note: Students seeking National Athletic Training Association (NATA) certification must also elect to take ESS 180, 182, 267, 485, and 486 and complete a minimum of 800 supervised clinical hours in the Ursinus College Athletic Training room.

Minor Concentrations

A minor concentration in coaching consists of ESS 100, 220, 267, 363, 365, 366, and 225 or 226. (22 semester hours) A minor concentration in wellness/fitness education consists of ESS 100, 167, 333, 334, 346, and 347. (21 semester hours) Strongly recommend Biology 100, 317 and 318.

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)** Mr. Dent
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.*
- 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, and coping strategies for managing stress will be explored, culminating in the development of a personal stress management plan. Two hours per week. *One semester hour.*
(Offered odd spring semesters beginning in 1999)
- 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 the living longer population are encouraged to enroll in this course. Two hours per week. *One semester hour.*
(Offered odd fall semesters)
- 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

EXERCISE AND SPORT SCIENCE

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 Staff

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 aero-

bics, 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)

ESS-222. Football, Soccer, and Volleyball Dr. Engstrom

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 Staff

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 Staff

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)*

ESS-232W. Current Trends in Health**Staff**

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**Dr. Engstrom**

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 hours laboratory per week. *Four semester hours. (Offered every fall semester)*

ESS-261W. Research Methods in Health and Human Performance**Dr. Davidson**

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)*

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**Mr. Dent**

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-178. Surface Anatomy and Muscle Function Testing**Staff**

This course focuses on identifying the topographic anatomy of specific body regions, as well as, the skin dermatome scheme. Muscle function and testing of various muscles will also be addressed. Prerequisite: pursuit of career in athletic training or physical therapy and permission of instructor. One hour lecture, one hour lab. *One semester hour. (Offered every fall semester)*

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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 Staff

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)*

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. Wailgum

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

Staff

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

Staff

This course is designed to develop a wholesome 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

Staff

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

EXERCISE AND SPORT SCIENCE

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 150 hours per semester. *Four semester hours. (Offered every semester)*

ESS-382. Clinical Practicum in Sports Medicine Staff
An off-campus clinical experience within the field of sports medicine at a staff-approved site. A research paper, one oral college presentation, and one on-site inservice presentation are required. Each student is expected to be on-site a minimum of 150 hours per semester. Prerequisites: ESS 178, 278, 378, and permission of the sports medicine staff. *Four semester hours. (Offered every spring semester)*

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 150 hours per semester. Open to senior ESS majors with permission of his/her advisor. *Four semester hours. (Offered every semester)*

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. Borsdorf
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.

ESS-478W. Senior Seminar in Athletic Training Staff
Contemporary issues, therapeutic techniques and trends in athletic training are examined through advanced theoretical and clinical readings from current sports medicine journals. A research paper and several oral presentations are required. Prerequisites: Limited to seniors applying for certification in athletic training. Three hours per week. *Four semester hours. (Offered every spring semester)*

ESS-485. Pathology in Sports Medicine Staff
This course examines the healing response of the body to soft tissue injuries, open wounds, and fractures. Common physiological adaptations to injuries, etiological factors that contribute to their occurrence, and the creation of an optimal healing environment will be the focus of this course. Prerequisites: ESS 351,

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378. Two hours lecture. *Two semester hours.*
(Offered odd spring semesters beginning in 1999)

ESS-486. Pharmacology in Sports Medicine Staff

This course provides an overview of drugs used by athletes for various medical conditions. Medical reasons for drug treatment, specific actions of therapeutic agents, and adverse effects and contraindications are presented. The following pharmacokinetic processes will be investigated: absorption, distribution, metabolism, and elimination. Prerequisite: CHE 105, 106/206, BIO 318 or permission of instructor. Two hours of lecture. *Two semester hours.*
(Offered even spring semesters)

ESS-487. Therapeutic Modalities Staff

This course focuses on the correct treatment regimen for a variety of athletic injuries. Physiological responses of the human body to trauma and the use of therapeutic heat and cold, as well as, current, sound and, electromagnetic wave forms will be examined. Prerequisites: ESS 351, 352, 178, 278, 378, and Phys 112. Three hours lecture and two hours lab. *Four semester hours.* (Offered odd summer sessions beginning in 1999)

FINE ARTS

See Art, Music

FRENCH

See Modern Languages

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 economic

ESS-488. Therapeutic Exercise Staff

This course reviews the objectives, indications, contraindications, and exercise progressions for the rehabilitation of athletic injuries.

Prerequisites: ESS 351, 352, 178, 278, 378 and 485. Three hours lecture and two hours lab.

Four semester hours. (Offered odd summer sessions beginning in 1999)

ESS-491. Research/Independent Work Staff

This course is open to candidates for departmental honors and to other students with a 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)

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.

GEOLGY/HISTORY

GEOL-100Q. Planet Earth

Ms. Pettingill

A study of earth materials, processes and features that form the earth. This enables the student to interpret earth history as events recorded by geologic processes and organic evolution. Two hours of lecture and two hours of laboratory work per week. *Three 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.*

GERMAN

See Modern Languages

GREEK

See Classics

HISTORY

Professors Akin, Clark (Chair), Doughty, Hemphill, Strassburger, Visser; Associate Professor King; Assistant Professor Aldridge.

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 publishing. 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, 321, 323, 325, 327, 328, 329); *two courses* in European history (202, 203, 205, 207, 304, 305, 306, 308, 352); *two courses* in non-Western history (241, 243, 251, 253, 343, 344); *one course* in comparative history (361, 362, 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 civilization. Significant selected primary sources will be assigned and short analytic papers required. Three hours per week. *Four semester hours.*

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-202. Topics in Medieval History

Dr. Visser

An examination of the development of the ideas and institutions that controlled Medieval socie-

HISTORY

ty. Relevant writings in translation will be used. Three hours per week. *Four semester hours.*

HIST-203. Studies in Renaissance History **Dr. Visser**

An examination of the cultural, economic, and social aspects of the Renaissance and their interdependence. Contemporary writings will be used in translation. 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-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-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-251. Topics in Ancient History **Dr. Visser**

An examination of the emergence of religious, legal and social concepts that became the basis of Western civilization. Relevant writings in translation will be used. Three 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. Studies in Reformation History **Dr. Visser**

An examination of the revolution in Christianity and its impact on the social, economic, and political institutions of the age. Contemporary writings will be used in translation. Three hours per week. *Four semester hours.*

HIST-305. State and Society in Early Modern Europe Dr. Doughty

A study of early European modernization and the development of the sovereign state from the 16th through the 18th centuries. Theories of political sovereignty, the development of royal absolutism and the "Military Revolution" and the concomitant religious, intellectual, social and economic transformations will be emphasized. Significant time will be devoted to the historiography of the period. Three hours per week of discussion of assigned reading. *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 analysis, 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-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 Dr. Aldridge

This course examines the historical context of African-descended people in the United States from colonial times to the present. 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

HISTORY

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-362. The Age of Revolution

Dr. Doughty

An examination of the "Dual Revolution" — the cumulative effects of the French and Industrial Revolutions — and the impact of political, economic and technological change on European society and the world in the period c. 1780 - 1900. Significant time will be devoted to the historiography of the topic. Three hours per week of discussion of assigned reading. *Four semester hours.*

HIST-365. Empires and Nations Staff

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. Doughty

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, 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.

HISTORY/INTERDIVISIONAL STUDIES

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.*

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-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.*

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.*

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 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 upperclass 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

LATIN

See Classics

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 their equivalents. Frequent writing and oral assignments are required throughout the course.

The theme for 1998-1999 is "Thinking Out of Bounds." This is an invitation to think about the boundaries in our world and in our minds, and to think about the opportunities presented by border crossings. The boundaries in question will differ from seminar to seminar. The ability to understand both the existence of boundaries and the possibilities of crossing them is crucial at this time when a revolution in information technology is making whole new worlds of knowledge available to all. "Thinking Out of Bounds" should help Liberal Studies instructors and students develop the navigation skills indispensable in the new millennium.

Topics listed in a supplemental brochure include "The Philadelphia Story/American Story," "Leadership Scholar Seminar," "Lines in the Sand: Cultural and Political Borders in the Middle East," "Crossing Environmental Boundaries," "Homo Sapiens and Human Folly: Time to Re-Name the Species," "The Biosphere - Environmental Frontiers," "A World Divided," "Beyond the Borders of the Ancient World," "Alternative Societies: Other Cultures, Utopias, Cults and Communes,"

"Taking it to the Limit: Sex, Politics and X-Rated Videotapes,"

"Reading America: 20th Century Moral Conflict," "Monologue and Dialogue," "Witches!" "The Art of Jazz: Lives, Legends and the Whole Story," "Living Newspapers," "Brittany: Revealing the Celtic Soul," and "Ashes, Ashes, We All Fall Down."

LS-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, 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* Ionascu, 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 recommended 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, including either CS 471 or 472.

Recommendations for Computer Science Majors

Recommended ancillary courses are Physics 111, 112, 121, 122, 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 Dr. Jessup
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 per week. *Four semester hours.*

CS-272. Computer Science II Dr. Jessup
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 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 Dr. Hagelgans

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 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 **Staff**
 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.*

MATHEMATICS AND COMPUTER SCIENCE

CS-474. **Topics in Advanced Computer Science II** Staff

A courses 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 spring semester of even years.

Three hours per week. *Four semester hours.*

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.*

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

Independent investigation of an area of computer science not covered in regular courses. An

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, 321, 411, 462
2. Math 335 plus one of 336, 434
3. Math 341 and 342

Recommendations for Mathematics Majors

Economics 100 and Physics 111, 112, 121, 122 are recommended.

Students planning to do postgraduate work in mathematics should take Math 311, 312, 321, 335, 336, and 411. 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. These students may substitute Math 241 for Math 342 in the major requirements. As many of the following as possible are recommended: Math 214, 311, 321, 336. 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.*

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, 321, 322, 335, 336, 341, 342, 411, 434, 462, at least one of these courses being at the 300 or 400 level.

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 **Dr. Hagelgans**

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 **Ms. Wait**

Conceptual understanding of differential and integral calculus. Some classical applications as well as applications to economics and business. Offered spring semester. 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 **Dr. Hagelgans**

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 **Dr. Neslen**

A continuation of Math 107. Calculus integrated with an extensive review of precalculus. Logarithmic and exponential functions and their applications, integrals, the fundamental 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. Hagelgans, 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 computer 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. Ionascu, 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. Neslen

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. Jessup

A continued study of basic statistical techniques including basic concepts of experimental 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. 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. Introduction to Analysis I

Dr. Ionascu

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. Introduction to Analysis II

Dr. Ionascu

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-321. Introduction to 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-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 I

Dr. Hagelgans, 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. Three hours per week. *Four semester hours.*

MATH-336. Abstract Algebra II

Dr. Hagelgans

A continuation of Math 335. Ring theory, integral domains and principal ideal domains, polynomial rings, fields leading to Galois theory and solvability by radicals. Classical origins of modern abstract algebra. This course will satisfy the College requirement for a capstone experience and an oral presentation in the major. Prerequisite: Math 335. Three hours per week. *Four semester hours.*

MATH-341. Probability

Dr. Coleman

An introduction to probability theory, discrete and continuous probability distributions, 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

Staff

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.*

MATHEMATICS AND COMPUTER SCIENCE

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-411. Functions of a Complex Variable Dr. Shuck

An introduction to the theory of analytic functions, including elementary functions, contour integrals, Taylor and Laurent series, and residue theory. Prerequisite: Math 211. Offered in the fall semester of even 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 transcendental 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: Permission of the instructor. Offered in the spring of even years. Three hours per week. *Four semester hours.*

MATH-441. Applied Research in Biostatistics

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 differ

entiation, 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 (*Chair*), Eaton, Hall, Lucas, Novack, Thelen; *Associate Professor* Cameron; *Assistant Professor* de Arana; *Instructors* Biel, Nishio (visiting) Parker, Seaver; *Lecturers* Hardin, Lüttcher, Reich, 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*)

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.

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, 101, 102. 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. Hall

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. Hall

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.*

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

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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

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. Hall

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. Hall

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.*

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.*

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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. Hall

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. *Four semester hours.*

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

Ms. Lüttcher

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

Ms. Lüttcher

Continuation of German 101. Four hours per week plus one conversation hour with the language assistant. *Four semester hours.*

GER-111. Intermediate German I Staff

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 Staff

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. This course will include formal and informal writing exercises 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 Staff

A survey of the works of major German writers from the Middle Ages to the 19th 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 Staff

The works of such 20th-century authors as Kafka, Brecht, Böll, Dürrenmatt, and Seghers 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

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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 Dr. Thelen

A study of German cultural, intellectual, and artistic life from the Middle Ages to the present. 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 Dr. Thelen

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 Staff

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 16 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 is strongly recommended. Three hours per week. *Four semester hours.*

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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 Ms. Nishio

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 Ms. Nishio

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 Ms. Nishio

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 Ms. Nishio

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 Ms. Nishio

Continuation of Japanese 112. Intensive review of structures and further development 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 Ms. Nishio

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 equiv-

alent. Four hours per week plus one hour of language lab. *Four semester hours.*

JAPN-301. Independent Study in Japanese
Ms. Nishio

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.*

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

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

JAPN-328. Advanced Japanese Language
Ms. Nishio

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.*

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 requirement. Prerequisite: Spanish 111 or equivalent. Four hours per week. *Four semester hours.*

SPAN-118. Spanish for the Health Professions Mr. Parker

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

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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, Staff

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, Staff

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. 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 require-

ment 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. Seaver

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 Dr. Eaton

The development of the Hispanic Culture as a conjunction of Eastern and Western experiences and its subsequent expansion and transforma-

tion 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 **Staff**

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 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**

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 Quixote. 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.*

MODERN LANGUAGES

SPAN-440W. Senior Seminar in Hispanic Studies Staff

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 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.*

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

Professor French (Chair); Assistant Professor (Visiting) David; College Organist Alan Morrison.

Requirements for Minor in Music History and Theory

A minor concentration in music history and theory consists of Music 100, 121 and four courses in music from the 200 level or above. At least one course at the 200 level in music history and one course at the 200 level in theory is required for the minor.

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-104. Evolution of Jazz Styles Staff

An introductory survey examining the historical development of jazz from its African origins through the present. The course will place emphasis on intensive listening assignments and research projects. Three hours per week. *Four semester hours.*

MUS-121. Fundamentals of Music Staff

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-201. Music of the Middle Ages, Renaissance and Early Baroque Dr. French

A study of music from its early origins through 1650. Intensive listening assignments and research projects required in the course. Prerequisite: Music 100 or by permission. Three hours per week. *Four semester hours.*

MUS-202. Music of the Middle-Late Baroque and Classical Periods Dr. French

A study of music from 1650 through 1825. Intensive listening assignments and research projects required in the course. Prerequisite: Music 100 or by permission. Three hours per week. *Four semester hours.*

MUS-203. Music of the Romantic Era Dr. French

A study of music from 1825 through 1910. Intensive listening assignments and research projects required in the course. Prerequisite: Music 100 or by permission. Three hours per week. *Four semester hours.*

MUSIC

MUS-204. Music of the 20th Century
Dr. French
A study of music from 1910 to the present. Intensive listening assignments and research projects required in the course. Prerequisite: Music 100 or by permission. Three hours per week. *Four semester hours.*

MUS-222. Harmony **Staff**
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 **Staff**
An exploration of the melodic, harmonic, and rhythmic principles of jazz. The course includes analysis of representative works by various jazz masters and will place a strong emphasis on student projects in composition and performance. 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 **Staff**
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 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 (approximately 35 voices) open by audition to students in the College Choir. Most of the ensemble's performances, including a tour, take place in the spring semester. Graded S/U. Two to three hours per week. *One-half semester hour.*

MUS-021-028. Ursinus College Concert Band **Staff**
A large instrumental ensemble open to everyone in the College community. Members perform a variety of literature representing different stylistic periods. The Concert Band presents two major concerts each year and may appear at other campus functions. Graded S/U. Two hours per week. *One-half semester hour.*

MUS-031-038. Ursinus College Jazz Ensemble **Staff**
A big band that performs arrangements of classic works of the jazz idiom. The ensemble is open to all members of the College community and presents several concerts during the year. 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 Anthropology 100, or History 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.*

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

Professor Hardman; Associate Professors Goetz (Chair), Stern; Lecturers Cohen, 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

PHILOSOPHY AND RELIGION

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, Dr. Cohen

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, Dr. Cohen

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 pol-

lution, 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. 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 ori-

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gins 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.*

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.*

PHILOSOPHY AND RELIGION/PHYSICS AND ASTRONOMY

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-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 reli-

gion 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 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, 121, 122, 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, 121, 122, 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, 121, 122, 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, 121, 122, 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.*

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 waves, utilizing mathematics in the presentation and in exercises. Prerequisite: Mathematics 110 or equivalent. Two hours of class meetings and two, two-hour workshops per week. *Four semester hours.*

PHYS-112. General Physics II Staff

A study of thermodynamics, electricity, magnetism, and light, utilizing mathematics in the presentation and in exercises. Prerequisite: Physics 111Q. Two hours of class meetings and two, two-hour workshops per week. *Four semester hours.*

PHYS-121. Problem-Solving Techniques I **Staff**

Problem solving in physics using mathematics (precalculus and differential calculus) and computer systems (spreadsheets, graphing programs, and symbolic computation systems). Pre- or corequisites: Physics 111Q, Mathematics 111 or 108. One hour per week. *One semester hour.*

PHYS-122. Problem-Solving Techniques II **Staff**

Problem solving in physics using mathematics (differential and integral calculus) and computer systems. Prerequisite: Physics 121; pre- or corequisites: Physics 112, Mathematics 112. One hour per week. *One semester hour.*

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 systems, central forces. Prerequisites: Physics 112, 121, 122; 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 Waves **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, 121, 122; 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, 121, Mathematics 111; pre- or corequisites: Physics 122. 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, 122, 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. Takats

Electric and magnetic fields and potentials, Laplace's equation, dielectrics and magnetic materials, Maxwell's equations, electromagnetic waves. Prerequisites: Physics 112, 122, 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, 122, 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-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.*

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 Berry, Fitzpatrick, Hood (Chair) Stern; Associate Professor Kane.

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.

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. Berry, Dr. Fitzpatrick,
Dr. Hood, Dr. Stern, Dr. Kane**

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. 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. Berry

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.*

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-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. 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.*

POLITICS AND INTERNATIONAL RELATIONS

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. 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, neoliberalism, 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. Berry

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. Berry

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. Berry

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.*

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. Hood

Intensive study of a special topic in comparative 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. Berry, 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 Berry, Clark, Doughty, Gallagher, Hood (Chair) O'Neill; Associate Professors King, Oboler.

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, 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 McMahan.

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 (Mass Media and Society).

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.

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 (approved topic applicable to the neurosciences), or Biology 332. Psychology 327 is recommended but not required.

PSYCHOLOGY

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-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. May be taken in conjunction with Psychology 327. Prerequisites: Psychology 100; Biology 100 or 111; or permission of the instructor. Three hours per week. *Three semester hours.*

PSYC-327. Neurosciences Laboratory

Dr. Rideout

A study of nervous system structure and function using the basic anatomical, physiological, and behavioral methods of the neurosciences. Topics include gross and microscopic neuroanatomy, electrophysiological recording, techniques of stereotaxic surgery, and experimental interventions in the central nervous sys-

tem. Corequisites: Psychology 325 and 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.*

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.*

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

**This course is not offered in 1999-2000.*

PSYCHOLOGY

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.*

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 psychology. 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.*

*This course is not offered in 1999-2000.

RELIGION

See Philosophy and Religion

SPANISH

See Modern Languages

WOMEN'S STUDIES

Professors Borsdorf (Advisory Council), Hall, Lionarons, Novack; Associate Professors Czubaroff, Dole, England, Gross, Hemphill, 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-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 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 hours. *Four semester hours.*

URSINUS COLLEGE CATALOG

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JAMES L. BAER, B.A., LL.B. Partner Lerch, Early & Brewer Chartered Bethesda, Md.	1991	2001
ROBERT L. BRANT JR., B.A., J.D. Partner, Keenan, Cicitto & Brant Collegeville, PA	1996	2001
JAMES W. BRIGHT, JR., B.A., B.Div., S.T.M., D.Min., Pastor Emeritus St. Paul United Church of Christ Manheim, Pa.	1988	2003
DAVID A. CORNISH, A.A. Chairman & CEO (Retired) Collegeville Flag & Mfg. Company Collegeville, Pa.	1986	2001
JOHN E.F. CORSON, B.A. President Corson Investment Company Plymouth Meeting, Pa.	1983	
BETTY BROWN DANDO, B.S. School Administrator (Retired) Glenside, Pa.	1989	1999
LLEWELLYN F. DRYFOOS, JR., B.A. President Dryfoos Insurance Agency, Inc. Hazleton, Pa.	1988	2003
CYNTHIA A. FISHER, B.S., M.B.A. President ViaCord, Inc. Boston, Mass.	1996	2001
SPENCER FOREMAN, B.S., M.D. President Montefiore Medical Center Bronx, N.Y.	1995	2000

DIRECTORY

THOMAS P. GLASSMOYER, B.A., LL.B., LL.D. Of Counsel Schnader, Harrison, Segal & Lewis Willow Grove, Pa.	1956	2002
CAROL K. HAAS, B.S., Ph.D., Sc.D. Technical Group Manager E.I. DuPont Richmond, Va.	1987	2002
ROBERT F. HARTMAN, B.A. Partner (Retired) R.J. Carroll Co., Inc. Springfield, Pa.	1986	2001
PETER HAVENS, B.A., M.B.A. Executive Vice President Bryn Mawr Trust Company Bryn Mawr, Pa.	1985	2000
WILLIAM F. HEEFNER, B.A., LL.B., LL.D. Of Counsel Curtin and Heefner Perkasie, Pa.	1969	2000
JERRY L. JOHNSON, B.S., M.S. Sr. Vice President, Operations Safeguard Scientifics, Inc. Devon, Pa.	1997	2002
RUTH KURISU, B.S. Small Business Consultant Laguna Niguel, Calif.	1998	2003
PAUL E. LEISER, B.S. Vice President Avalon Real Estate Agency Avalon, N.J.	1995	2000
MARILYN S. LEWIS Community Volunteer Lederach, Pa.	1995	2000
MICHAEL J. LEWIS, B.S., M.S., Ph.D. Professor & Chairman of Psychology Temple University Philadelphia, Pa.	1991	2001
J. ROBERT LOVETT, B.S., M.S., Ph.D. Retired Executive Vice President Air Products & Chemicals Allentown, Pa.	1997	2002
BETTY UMSTAD MUSSER, B.A., L.H.D. Community Volunteer Wayne, Pa.	1982	2002
DR. ALBERT M. PAOLONE, B.S., M.S., Ed.D., FACSM Professor of Exercise and Environmental Physiology Temple University Philadelphia, Pa.	1996	2001

URSINUS COLLEGE CATALOG

DONALD E. PARLEE, B.S., M.D. Parlee & Tatem Radiologic Associates Doylestown, Pa.	1983	2000
HENRY W. PFEIFFER, B.S., M.S. Xp=dX Senior Sales Representative Union, N.J.	1978	2003
ROBERT POOLE, B.S., M.D. Physician (Retired) West Chester, Pa.	1985	2000
ROBERT A. REICHLEY, B.A., LL.D. President, Ursinus Board of Directors Executive Vice President and Secretary (emeritus) Brown University Providence, R.I.	1987	2002
RICHARD P. RICHTER, B.A., M.A., LL.D., L.H.D. President Emeritus Ursinus College Collegeville, Pa.	1976	2001
JACK W. ROBBINS, B.A., LL.B. President, Pitcairn Inc. (Retired) Jenkintown, Pa.	1984	1999
MITCHEL SAYARE, B.S., Ph.D., DSc. Chairman and CEO ImmunoGen, Inc. Norwood, Mass.	1995	2000
HAROLD C. SMITH, B.A., M.B.A., M.Div., D.D. President The Young Men's Christian Association Retirement Fund New York, N.Y.	1994	1999
JAN M. SMITH, B.A. Summit Bank Fort Washington, Pa.	1988	2001
DONALD G. STAUFFER, B.A. Vice President (Retired) Drake Beam Morin, Inc. Berwyn, Pa.	1988	2003
MARILYN L. STEINBRIGHT, B.S., LL.D. President Arcadia Foundation Norristown, Pa.	1975	2000
EDWARD J. STEMMLER, B.A., M.D., Sc.D., L.H.D. Executive Vice President (Retired) Association of American Medical Colleges Washington, D.C.	1992	2002

JOHN STRASSBURGER, B.A., M.A., Ph.D. President Ursinus College Collegeville, Pa.	1995	2000
RICARDO V. TAYLOR, B.A., M.A. Assistant Principal Pennsauken High School Pennsauken, N.J.	1995	2000
WILLIAM G. WARDEN, B.A. Chairman Superior Group, Inc. Wynnewood, Pa.	1982	2002
GREGORY R. WENHOLD, B.A., M.Div. Pastor Good Shepherd Lutheran Church Naperville, Ill.	1993	2003

LIFE MEMBERS

JAMES H. BAIRD, B.S., M.S., Sc.D. Chadds Ford, Pa.	1979
THOMAS J. BEDDOW, B.A., J.D., LL.D. Hobe Sound, Fla.	1958
JAMES G. CROUSE, B.S., M.S. Limerick, Pa.	1980
PAUL DOUGHTY, B.A., Ph.D. Gainesville, Fla.	1997
DAVID J. KNAUER, B.A. West Chester, Pa.	1997
HENRY P. LAUGHLIN, M.D., Sc.D., Sc.S.D., B.S. Union Bridge, Md.	1967
ALEXANDER LEWIS, JR., B.S., M.S., Ph.D., Sc.D. Pittsburgh, Pa.	1972
SHELDON E. MACKEY, B.A., B.D., D.D., LL.D. Blandon, Pa.	1960
GEOFFREY MARSHALL, B.A., M.A., Ph.D. Cranberry, N.J.	1998
GLADYS C. PEARLSTINE, B.A. Haverford, Pa.	1997
WILLIAM S. PETTIT, B.S., M.S., Sc.D. Naples, Fla.	1970
CARL A. POSSE Blue Bell, Pa.	1979
J. PERMAR RICHARDS, JR., L.H.D. Bryn Mawr, Pa.	1997
DAVID M. SCHMID, B.S. Blue Bell, Pa.	1971

COMMITTEES OF THE BOARD OF DIRECTORS

(President Strassburger is appointed ex officio to all committees with voice and vote.)

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Assistant Secretary: MARILYN L. STEINBRIGHT, Norristown, Pa.

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PEGGY BAER, B.B.A., *Computing Systems Manager*

LISA TREMPER BARNES, M.A., *The Muriel M. Berman Director, Berman Museum of Art*

JANE BARTH, M.A., *Environmental Health & Safety Coordinator*

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C. RICHARD BOGDAN, *Network Systems Administrator*

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JAMES COOPER, M.B.A., *Controller*

PAUL CRAMER, B.A., *Director, Admissions*

PAMELA M. DANCU, B.A., J.D., *Director of Major Gifts*

BETTY DAVIDSON, B.B.A., *Student Accounts Administrator*

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PIA HOUSEAL-ALLPORT, B.A., *Admissions Counselor*

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JAN LEVENGOOD, B.S., *Coordinator of Evening Advising and Support*

JOSHUA E. LISS, B.A., *Director of Annual Giving*

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TODD P. MCKINNEY, M.S., *Assistant Dean of Student Leadership Development, Student Activities, Security*

STEPHANIE A. McNULTY, M.Ed., *Assistant Dean of Student Life/Director of Residence Life*

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ERIC ORDWAY, A.A.S., *User Support Specialist*

PHYLLIS OSISEK, M.A., A.A.M.F.T., *Counselor*

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 BRIAN THOMAS, B.S., *Sports Manager*
 SUE THOMAS, B.A., *Associate Director of Admissions/GRR*
 JOSEPH TRUMP, B.B.A., *User 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 1998-1999

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.

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.

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.

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.

URSINUS COLLEGE CATALOG

- 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.
- WILLIAM SCHUYLER PETTIT, M.S., Sc.D., *President, Emeritus; Professor of Chemistry, Emeritus*
B.S. in Chemistry, M.S., University of Pennsylvania; Sc.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.
- 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.
- 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.

Active

- 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.
- LISA TREMPER BARNES, M.A., *Adjunct Professor of Fine Arts* (1987)
 B.A., University of Richmond; M.A., University of Southern California.
- NANCY L. BATES, M.A., *Lecturer in English* (1993)
 B.A., West Chester University; M.A., West Chester University.
- NICHOLAS O. BERRY, Ph.D., *Professor of Politics* (1982)
 A.B., Bethany College; M.A., Ph.D., University of Pittsburgh.
- CORRINE BOETTGER, M.A., *Lecturer in Exercise and Sport Science* (1998)
 B.A., Ursinus College, M.A., Villanova University.
- LAURA BORSODORF, 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, 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.
- ADELE PACK BOYD, M.Ed., *Professor of Exercise and Sport Science and Associate Director of*
Athletics (1967)
 B.S., Ursinus College; M.Ed., Temple University.
- KEITH BRAND, *Lecturer in Communications Studies* (1998)
 B.F.A. West Virginia University; M.Ed., Temple University.
- FRIEDA BRINKMANN, Ph.D. *Lecturer in Modern Languages* (1996)
 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.

URSINUS COLLEGE CATALOG

- 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.
- HUGH R. CLARK, Ph.D., *Professor of History* (1982)
B.A., M.A., Ph.D., University of Pennsylvania.
- ROBIN A. CLOUSER, Ph.D., *Professor of German* (1974)
B.A., Ursinus College; A.M., University of Pennsylvania; Ph.D., University of Kansas.
- LESLEY COHEN, Ph.D., *Lecturer in Philosophy* (1996)
B.A., University of California at Davis; M.A., University of St. Andrews, Scotland; Ph.D., University of Chicago.
- ROGER D. COLEMAN, Ph.D., *Professor of Mathematics* (1979)
B.A. and Ph.D., Johns Hopkins University.
- JEANINE KALLANDER CZUBAROFF, Ph.D., *Associate Professor of Communication Studies and Theatre* (1981)
B.A., Tufts University; M.A., Boston University; Ph.D., Temple University.
- NORMAN DAVID, D.M.A., *Assistant Professor (Visiting) 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.
- DAVID DAY, Ph.D., *Lecturer in Politics* (1996)
B.A., Ursinus College; M.A., Fordham University; Ph.D., Fordham University.
- JUAN-RAMON De ARANA, Ph.D., *Assistant Professor (Visiting) of Spanish* (1996)
Licenciatura, Universidad Autonoma de Madrid (Spain); 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.
- SHIRLEY K. EATON, Ph.D., *Professor of Spanish* (1980)
B.S., Boston University; M.A., Middlebury College; Ph.D., University of Wisconsin, Madison.
- 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.

- LYNNE Y. EDWARDS, Ph.D., *Assistant Professor of Communications Studies & 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., *Assistant Professor of Exercise and Sport Science* (1993)
 B.A., M.A., California State University, Fresno; D.Ed., University of Northern Colorado.
- KEITH ESCH, Ph.D., *Assistant Professor, Biology* (1996)
 B.S., University of California, Davis; Ph.D., University of California, San Diego, La Jolla.
- 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.
- 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., in L.S., *Associate Professor and Reference Librarian* (1969)
 B.A., Ursinus College; M.S. in L.S., Drexel Institute of Technology.
- HOLLY C. GAEDE, Ph.D., *Assistant 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.
- EDWARD GILDEA, M.A., *Lecturer in Philosophy and Religion* (1998)
 B.A., Ursinus College, M.A., Villanova University.
- KATHRYN A. GODDARD-DOMS, Ph.D., *Assistant 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 & Theatre* (1991)
 B.A., Pennsylvania State University; M.S., Marywood College.
- SHERYL BARATZ GOODMAN, Ph.D., *Assistant Professor (Visiting) of Communication Studies
& Theatre* (1997)
 B.A., Georgetown University; M.A., Ph.D., Temple University.
- 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.

URSINUS COLLEGE CATALOG

- PAUL GUENTHER, M. A., *Lecturer in Exercise and Sport Science* (1997)
B.A., Ursinus College; M.A., Western Maryland College.
- NANCY LINEKEN HAGELGANS, 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.
- COLETTE TROUT HALL, Ph.D., *Professor of French* (1983)
License, Universite de Nanterre; M.A., Ph.D., Bryn Mawr College.
- MELISSA HARDIN, M.A., *Lecturer in Spanish* (1996)
A.B., University of Missouri; M.A., Middlebury College.
- 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, C.P.A., *Associate Professor of Economics and Business Administration* (1984)
B.A., M.B.A., University 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.
- DONALD L. HILLEGAS, *Master Equivalency, Lecturer in Education* (1998)
B.S., West Chester University, Master Equivalency Certification.
- 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.
- ILEANA IONASCU, Ph.D., *Assistant Professor of Mathematics* (1998)
B.S., M.S., University of Bucharest, Ph.D., University of New Hampshire.
- 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.
- 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.
- 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.
- MARIAN L. KNECHEL, Ph.D., *Lecturer in Chemistry* (1995)
 B.S., Philadelphia College of Pharmacy and Science; Ph.D., University of Pennsylvania.
- 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., *Assistant 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.
- DAVID MCCAIG, M.A., *Lecturer in Education* (1996)
 B.A., St. Joseph's University, M.A., Villanova University.
- ALESSANDRA MCCARRAHER, M.S., *Lecturer in Education* (1997)
 B.S., Bloomsburg University; M.S., Temple University.
- 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.
- JOHN MENICHIELLO, M.Ed., *Lecturer and Acting Chair in Education* (1998)
 B.A., The Pennsylvania State University, M.Ed., Central State University.

URSINUS COLLEGE CATALOG

- 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 & Theatre* (1984)
B.A., M.C.R.P., Rutgers University; M.A., Miami University; Ph.D., The Union Institute.
- 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.
- JAMES NOVERAL, Ph.D., *Assistant Professor (Visiting) of Biology* (1998)
A.B., Temple University; M.S., Ph.D., Drexel University.
- 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.
- JENA OSMAN, M.F.A., *Assistant Professor (Visiting) of English and Creative Writing* (1997)
B.A., Oberlin College; M.F.A., Brown University.
- ROBERT J. PARKER, M.A., *Lecturer, Department of Modern Languages* (1998)
A.A., San Francisco City College, B.A., San Francisco State College, M.A., California State University, Sacramento.
- PETER FLINT PERRETEN, Ph.D., *Professor of English* (1973)
B.A., Moorhead State College; M.A., Idaho State University; Ph.D., University of Delaware.
- SONJA PETTINGILL, M.S., *Assistant Director of Continuing Education and Lecturer in Geology* (1997)
B.S., University of Toronto; M.S., University of Michigan.
- JASON K. PHILLIPS, M.B.A., *Instructor in Economics and Business Administration* (1997)
B.S., The 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.
- GERHARD REICH, Ph.D., *Lecturer in German* (1997)
M.A., Ph.D., University of Pennsylvania.

- 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.
- DONNA M. SABELLA, M.Ed., *Lecturer in Modern Languages* (1992)
 B.A., Indiana University; B.S.N., Thomas Jefferson University; M.Ed., Temple University.
- STEPHEN SABOE, M.E., *Lecturer in Education* (1996)
 B.S., M.E., West Chester State University.
- KIMBERLY A. SANDO, M.S., *Assistant Professor and Media Services Librarian* (Spring 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., *David Laucks Hain Professor of Chemistry* (1965)
 B.S., Muhlenberg College; M.S., Ph.D., Lehigh University.
- PAUL W. SEAVER, Ph.D., *Lecturer in Modern Languages* (1998)
 B.S., Kent State University; M.A., University of Connecticut, Ph.D., University of Maryland.
- JANE PERRETTEN SHINEHOUSE, P.T., *Professor of Biology* (1960)
 B.S., Ursinus College; P.T., University of Pennsylvania.
- JOHN WINFIELD SHUCK, Ph.D., *Professor of Mathematics* (1977)
 B.S., Massachusetts Institute of Technology; M.S., Tufts University; Ph.D., Northeastern University.
- JAMES M. SIDIE, Ph.D., *Professor of Biology* (1983), *Brownback-Wagner Chair of Health Sciences*
 B.S., M.S., Ph.D., Notre Dame University.
- PETER FORREST SMALL, Ph.D., *Associate Dean and 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.
- JOHN STRASSBURGER, Ph.D., *President of the College, Professor of History* (1995)
 B.A., Bates College; M.A., Cambridge University; Ph.D., Princeton University.
- KATHLEEN TACELOSKY, Ph.D., *Assistant (visiting) Professor of Spanish* (1997)
 B.A., Ursinus College; M.A., Westchester University, Ph.D., University of Texas, Arlington.
- MARTHA CARROLL TAKATS, Ph.D., *Professor of Physics* (1969) *Guilliam H. Clamer Chair of Physics*
 B.A., Wellesley College; M.S., University of Wisconsin; Ph.D., University of Pennsylvania.
- LYNN M. THELEN, Ph.D., *Professor of German* (1982)
 B.A., Pennsylvania State University; M.A., Ph.D., University of Pennsylvania.

URSINUS COLLEGE CATALOG

- 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)
B.S., Manhattan College; M.A., Ph.D., Princeton University.
- DERK VISSER, Ph.D., *Professor of History* (1968)
M.A., University of Pennsylvania; Ph.D., Bryn Mawr College.
- JON VOLKMER, Ph.D., *Associate Professor of English* (1987)
B.A., University of Colorado at Denver; M.A., University of Denver; Ph.D., University of Nebraska at Lincoln.
- TINA D. 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.
- 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., *Assistant Professor of Chemistry* (1995)
B.A., Carleton College; Ph.D., University of North Carolina.
- 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.

Date in parentheses is date of first appointment at Ursinus College.

Endowed Chairs:

Joseph T. Beardwood, III Chair of Mathematics.....	Peter Jessup.....	9/98 to 6/03
Brownback-Wagner Chair in Health Sciences.....	Ellen Dawley.....	9/98 to 6/00
Guilliam H. Clamer Chair of Physics.....	Martha Takats.....	9/98 to 6/01
William F. Heefner Chair of Music.....	John H. French.....	9/98 to 6/03

OFFICERS OF THE FACULTY

Chairman, President Strassburger

Secretary, Professor Takats

FRESHMAN ADVISERS

Coordinator of Freshman advising: Professor Kelley

Professor Akin

Professor Borsdorf

Professor Boyd

Professor Cameron

Professor Chambliss

Professor Clark

Professor Clouser

Professor Czubaroff

Professor David

Professor Davidson

Professor E. Dawley

Professor deAranra

Professor Dole

Professor Doughty

Professor Eaton

Professor Edwards

Professor England

Professor Engstrom

Professor French

Miss Fryer

Professor Gaede

Professor Gallagher

Professor Goetz

Professor Hagelgans

Professor Hardman

Professor Hess

Professor Hood

Mr. Jamison

Professor Kane

Professor Kane

Professor Kelley

Professor King

Mrs. Malone

Mr. McKinney

Professor Miller

Professor Nagy

Professor Neslen

Professor Novack

Professor Oboler

Professor Potter-Hennessey

Professor Price

Professor Richardson

Mrs. Rinde

Mrs. Sando

Professor Shuck

Professor Stern

Professor Takats

Professor Tortorelli

Professor Volkmer

MAJOR PROGRAM ADVISERS

Advisers will be assigned by the chairperson or coordinator of the student's major. They are:

Anthropology and Sociology, Professor Gallagher

Biology, Professors Robert Dawley and Ellen Dawley

Chemistry, Professor Tortorelli

Classics, Professor Wickersham

Communication Studies and Theatre, Professor Miller

Computer Science, Professor Jessup

East Asian Studies, Professor Clark

Economics and Business Administration, Professor O'Neill

English, Professor Dole

Exercise and Sport Science, Professor Davidson

French, Professor Hall

German, Professor Thelen

History, Professor Clark

International Relations, Professor Hood

Mathematics, Professor Jessup

Philosophy and Religion, Professor Hardman

Physics, Professor Takats

Politics, Professor Hood

Psychology, Professor Chambliss

Spanish, Professor Cameron

URSINUS COLLEGE CATALOG

PRE-PROFESSIONAL ADVISERS

Education, Professor Gross

Engineering, Professor Takats

Law, Professor Fitzpatrick

Medicine, Professor Hess

INTERNATIONAL STUDENT ADVISER

Stacy Gager

STUDY ABROAD COORDINATOR

Melissa Hardin

CLASS ADVISERS

Class of 2002, Professor Price

Class of 2001, Professor Economopoulos

Class of 2000, Professor Hemphill

Class of 1999, Mr. McKinney

FACULTY COMMITTEES

CAMPUS PLANNING AND PRIORITIES

Membership: Strassburger, (Chair), DiFelicianantonio, Levy, Guilmette, Rice, Lucas, Dole, Harris, Tortorelli, Hemphill, Borsdorf, Sean Clayton, '99 and Uriah Albrink, '99.

OUTCOMES ASSESSMENT:

Membership: Lucas, J. King, Rinde, A. Economopoulos, Hemphill, Davidson, Dawn Chavous, '01, Uriah Albrink, '99 and Heather Hartman, '00.

ENROLLMENT

Membership: DiFelicianantonio, Guilmette, Sparrow, Small, Edwards, Scultz, Goddard, Kelley, Richardson.

ACADEMIC COUNCIL

Membership: Strassburger, Levy (Chair), French, Lobo, Gallagher, Sidie, England, Thelen, Schroeder, Gaede, Aaron Ranck, '02 and Audrey Molineux, '01.

ACADEMIC SUPPORT

Membership: Lucas, Goddard, Oboler, Jamison, Novack, Richardson, Nicole D'Angelo, '01 and Dawn Chavous, '01.

ACADEMIC STANDARDS AND DISCIPLINE

Membership: Levy (Chair), Boris, Nolan, Lange, Lucas, Bowers, Tortorelli, Doughty, E. Dawley, Kelley.

SUBCOMMITTEE ON ACADEMIC STANDARDS AND DISCIPLINE

Membership: Bowers, Tortorelli, Doughty, Kim Hoover, '99 and Erica Dietrich, '00.

GRADUATE AND PROFESSIONAL EDUCATION

Membership: Kane, Dole, Lobo, Hagelgans, Wickersham, Jen Alessandrini, '00, Laura Hiergesell, '00 and Joe Kern, '00.

PROMOTION AND TENURE Advisory Committee

Membership: Strassburger, Levy, Hood, Miller, Wailgum, Gallagher.

FACULTY DEVELOPMENT

Membership: Levy (Chair), Lionarons, Williamsen, Stern, French and Gallagher.

APPEALS

Membership: 3 Administrators, Fields, Richardson, Cameron replacing Mill, Fall '98.

GOVERNANCE

Membership: Dole, Coleman O'Neill, Kane replacing Fitzpatrick, Fall '98, Fryer replacing Mill, Fall '98, Gaede replacing Hess, Spring '98, Wickersham, Fields, Oboler.

FACULTY AFFAIRS

Membership: Strassburger, Guilmette, Levy, R. Dawley, Goetz, A. Economopoulos.

STUDENT ACTIVITIES AND SERVICES

Membership: Nolan, McNulty, Edwards, Keita, Thiel, Esch, Ernest A. Hoke Jr., '00. Kelly McGuffin, '01, Amanda Johnson, '99, Andrew Haines, '01, Susan Fialkowski, and Joseph P. Pope Jr., '02.

JUDICIARY BOARD

Membership: A. Economopoulos, Allen, Borsdorf, Stern, Michael Edwards, '00, Lesli Thomas, '99 and Danielle Thompson, '01.

Alternates: Hardin, Rideout, DeCatur, Kristin Geist, '00, Laura Fontaine, '01 and Jacqueline Colvin, '99.

INTERCOLLEGIATE ATHLETICS

Membership: Akin, Boyd, Borsdorf, Lobo, Engstrom, Shuck, Suzanne Schramm, '01, Meghann Kissel, '01, Candice Wellens, '02, Matt Bigert, '00, Andy Perri '00 and Mike Boyer, '00.

DIVERSITY

Membership: Patton, Rice, Fryer, Cameron, Oboler, Young Park, '02, Denise Velez, '99 and Kimberly Hoover, '99.

BOARD COMMITTEES

BUILDINGS AND GROUNDS

Membership: Board Members, Strassburger, Klee, Rice, Nolan, Guilmette, Jamison, Perreten, Joe Kern, '00 and Heather Hartman, '00.

CAMPUS INVESTMENT

Membership: Board Members, Strassburger, Guilmette and O'Neill.

FACULTY SECRETARY

Takats

PARLIAMENTARIAN

Jessup

ALUMNI ASSOCIATION EXECUTIVE COMMITTEE - 1998-99

President:

Phillip Brackin, M.D., '63

President Elect:

Susan A. Benner, '76

Secretary:

Helen Turnbull, '60

Faculty Representatives:

Barbara Boris '83

Judith E. Fryer, '65

Alumni Representatives:

Neil S. Brown, '84

Brian F. Clark, '83

Robert Fleming, '62

Sarah Jane Kennedy, '71

Bruce C. McMillin, '76

Daniel Scholl, '87

David J. Viola, '82

Lynne Y. Watson, '61

Evening Division Representative:

Barbara E. Forbes, '90

Alumni Representatives to the Board of Directors:

Wilbert D. Abele, '61

Betty Brown Dando, '45

Paul Leiser, '66

Dr. Albert M. Paolone, '55

The Rev. Dr. Gregory R. Wenhold, '75

Past President:

Hermann A. Lintner, '52

Chair, Young Alumni Organization:

Maria Costa Woytek, '92

Chair, Bruins Club:

Valerie Furman, '81

Alumni Awards:

Ursinus College Alumni Awards:

W. Robert Crigler, Ph.D., '56

Joanne Kuhn, '55

Hermann A. Lintner, '52

Bernard F. Master, D.O., '62

Alumni Senior Awards:

Cristin Veit, '98

Philip Mandato, '98

PRIZES, HONORS, DEGREES

Awarded in 1998

- The Alumni Senior Award:** Cristin Anne Veit, '98 and Philip A. Mandato Jr., '98
- The American Chemical Society Award:** Joseph John Romano, '98
- The American Chemical Society Award in Analytical Chemistry:** John E. Shilling, '99
- The American Chemical Society Award in Organic Chemistry:** Janel S. Reppert, '00
- The American Institute of Chemists Award:** Linda Hoai Huong Tran, '98
- The Cyrus E. Beekey Prize:** Daniel G. Kiefer, '98
- The Biology Laboratory Technique Award:** Brian Craig Jameson, '98
- The Boeshore Prize:** Kirsten J. Mascioli, '01
- Chemistry Laboratory Technique Award:** Joseph John Romano, '98
- The CRC Press Freshman Chemistry Achievement Award:** Joel L. Dion, '01 and Hieu T. Luu, '01
- The Alfred L. Creager, '33, Prize:** Lawrence Michael Santucci, '98
- The Cub and Key Prize:** Jeffrey Church, '01
- The J. Douglas Davis Prize:** Edward Patrick Abbott, '98
- The George Ditter Prize:** Christian Cale Rice, '98
- The Geoffrey Dolman Prize:** in Creative Writing Dennis Cormac McCarthy, '98
- The Duttera Prize:** Shawn Albert Ogiba, '98
- The Ehret Prize:** Janetta Marie Trecroce, '98
- The Faculty Prize in Computer Science:** Scott Frederick Hofmann, '98
- The Faculty Prize in History:** Not Awarded in 1998
- The Faculty Prize in Mathematics:** Tracey Lynn Zeiler, '98 and Jill Renee Schweitzer, '98
- The Faculty Prize in Politics:** Not Awarded in 1998
- The Edwin M. Fogel Prize:** Curran I. Geist
- The Philip H. Fogel Memorial Prize:** Mark A. Pinsk, '98
- The French Award:** Jessica Lynne Haldeman, '98
- The German Award:** Christian Cale Rice, '98 and Bryan Thomas Shealer, '98
- The Thomas P. and Frances T. Glassmoyer Scholastic Award:** Melissa Courtney Gilbert, '98
- The Olive Sargeant Hamm Award:** Megan Lea Larkin, '98
- The Elizabeth Hankel Memorial Prize:** Philip Caiazzo, '98 and Brooke S. Garbarino, '98

- The Robin Blood Harris, '56, Memorial Prize:** Anne Hyer Alleger
- The Horioka Latin Prize:** Daniel C. Jones, '98
- The Ronald C. Kichline Prize:** Philip H. Nagengast, '98
- The Laughlin Award:** Letitia Danielle Grabowski, '98
- The William L. Lettinger Chemistry Award:** Stephanie Maria Piraino, '98
- The Elizabeth Rockefeller McCain Prize:** Meghan B. Gualtieri, '00 and
Laura M. Siciliano, '00
- The Merck Index Award:** Isis M. M. Shanbaky, '98
- The Professor Eugene H. Miller Prize:** Christian Cale Rice, '98
- The Jesse Ashworth Miller Prize:** Jennifer Lynne Calhoun, '98
- The Wayne F. Millward, '57, Memorial Prize:** Joseph Michael Catalfano,
'98
- The George H. Nietzsche Prize:** Jennifer Lynne Calhoun, '98
- The Mary Onopchenko, '85, Memorial Prize:** Melinda Chere Albert, '98
- The Paisley Prize:** Scott Frederick Hofmann, '98
- The Parsons Prize:** Jonathan G. Swearer, '98
- The Pennsylvania Institute of Certified Public Accountants Prize:** Teresa
M. Green, '98
- The Peters Prize:** Anne-Marie Elizabeth Parker, '98
- Professor William J. Phillips Prize:** Thomas R. Holstein, ED
- The Miriam and Irving N. Rosenthal Memorial Award:** Susan E. Pauley,
'99
- The W.W. Smith Prize:** Christian Cale Rice, '98 and Teresa M. Green, '98
- The Spanish Award:** Andrea Carolina Gaitan, '98 and Heather Marie Arnold,
'98
- The Harry C. Symons Award in Economics:** Randall J. McDonald, '98
- The Robert Trucksess Prize:** Teresa M. Green, '98
- The Teresa L. Urban Leadership Award:** Letitia Danielle Grabowski, '98
- The Wagman Prize:** Melanie Jeanne Hoover, '98
- Wall Street Journal Award:** Jessica Lynne Haldeman, '98
- The Professor Elizabeth B. White Award:** Joanna M. Doyle, '99
- The Whitian Prize:** Lauren E. Charles, '01
- The William B. Williamson Prize in Philosophy:** Sean Randall Sarles, '98

FACULTY AWARDS

- The Laughlin Professional Achievement Award:** John French
- The Lindback Distinguished Teaching Award:** Heather O'Neill

CLASS OF 1998 OFFICERS

President: Brian John Baily
 Vice President: Christine Hye Hwa Cho
 USGA/Service Chairperson: Christian Cale Rice
 Fund-Raising Chairperson: Vincent P. Kasper, Jr
 Treasurer: Kerim I. Oncu
 Social Chairperson: Michael Huffman
 Class Representative: Ryan Emrys Billheimer

COMMENCEMENT HONORS

Valedictorian: Melissa Courtney Gilbert

Salutatorian: Tarik Farouk Qasim

Summa Cum Laude:

Joanne Beard	Kirk Mackey
Linda Cartwright	Tarik Qasim
Joseph Catalfano	Joseph Romano
Jeanette Clugston	Alan Scholl
Melissa Gilbert	Jill Schweitzer
Filippa Guerra	Victoria Wilkins.
Robert Kensinger	

Magna Cum Laude:

Edward Abbott	Victoria Klopp
Christina Dappollone	Jennifer Krouse
Carrie Groff	Melissa Myers
Jessica Haldeman	Regina Phillips
Scott Hofmann	Christian Rice
Kevin Hollingsworth	Jonathan Rundle
Brian Jameson	Helen Strohecker
Vincent Kasper Jr.	Daniel Weinstein
Lisa Schrems	Tracey Zeiler.
Daniel Kiefer	

URSINUS COLLEGE CATALOG

Cum Laude:

Heather Arnold
Matthew Caia
Michael Degler
Meera Domingo
Sarah Fielding
Roberta Fleck
Steven Galati
Elizabeth Gillard
Teresa Green
Brian Hamrick
William Harding III
Michael Hartman
Stephanie Klenk
Eileen Knight
Michelle Landis
Kelly Mazzanti
William McCoskery
Barbara Miller

Beth Miller
Brett Nath
Kerim Oncu
Matthew Onorato
Edna Plank
Michael Romello
Pamela Ruoff
Isis Shanbaky
Lauren Steffen
Patricia Stone
Linda Huon Tran
Janett Trecroce
Michael Van Ryn
Hera Walker
Kate Weinrich
David P. Yanusko

DEPARTMENTAL HONORS

ANTHROPOLOGY

Jennifer Lynn Calhoun

BIOLOGY

Heather Ann Iocca
Daniel G. Kiefer

Brian Craig Jameson
Jessica Beth Krupnick

BIOCHEMISTRY

Isis M. M. Shanbaky

CHEMISTRY

Monica I. Jushchysyn
Stephanie Maria Piraino
Melvin D. Schursky

Vincent P. Kasper, Jr.
Joseph John Romano
Linda Hoai Huong Tran

COMMUNICATION STUDIES AND THEATER

Lauren Annetta Steffen

EAST ASIAN STUDIES

Hera Sue Walker

ECONOMICS AND BUSINESS ADMINISTRATION

Lawrence Michael Santucci

EDUCATION

Colleen Marie Maloney

ENGLISH

Joseph Michael Catalfano
Jared R. Rakes

Brian M. Manrick
Taneille Marie Smith

FRENCH

Jessica Lynne Haldeman

Tara Jean Patenaude

GERMAN

Jeevan S. Sekhar

HISTORY

Edward Patrick Abbott

Jonathan G. Swearer

MATHEMATICS AND COMPUTER SCIENCE

Scott Frederick Hofmann
Tracey Lynn Zeiler

Jill Renee Schweitzer

PHILOSOPHY AND RELIGION

Mark A. Pinsk

PHYSICS

Dana M. Mastrovito

POLITICS

Christian Cale Rice

PSYCHOLOGY

Meera Michelle Domingo
Mark A. Pinsk
Gregory Edmund Urban

Matthew M. Doran
Jamie Lyn Pontino

SPANISH

Heather Marie Arnold
Keith David McCarty

Stacey Elizabeth Di Blasi

PHI BETA KAPPA

Edward Patrick Abbott, '98
Heather Marie Arnold, '98
Benjamin C. Baehr, '99**
Matthew E. Caia, '98
Joseph Michael Catalfano, '98
Christina M. Dappollone, '98
Meera Michelle Domingo, '98
Sarah A. Fielding, '98
Melissa Courtney Gilbert, '98*
Carrie Elizabeth Groff, '98
Filippa Marie Guerra, '98
Jessica Lynne Haldeman, '98
Scott Frederick Hofmann, '98
Brian Craig Jameson, '98
Daniel G. Kiefer, '98

Jennifer Chieko Krouse, '98
Melissa A. Myers, '98
Susan E. Pauley, '99**
Tarik Farouk Qasim, '98*
Christian Cale Rice, '98
Joseph Joseph Romano, '98
Jonathan W. Rundle, '98
Jill Renee Schweitzer, '98*
Isis M. M. Shanbaky, '98
Lauren Annetta Steffen, '98
Linda Hoai Huong Tran, '98
Hera Sue Walker, '98
Daniel Lee Weinstein, '98
Victoria Marie Wilkins, '98*
Tracey Lynn Zeiler, '98

*Class of 1998, elected as juniors

**Class of 1999

CUB AND KEY

Matthew E. Caia, '98
Joseph Michael Catalfano, '98
Steven A. Galati, '98
Brian Craig Jameson, '98
Daniel G. Kiefer, '98
Edward T. Luberski Jr., '98
Philip H. Nagengast, '98

Kerim I. Oncu, '98
Jared R. Rakes, '98
Christian Cale Rice, '98
Joseph John Romano, '98
Michael Anthony Romello, '98
Jonathan W. Rundle, '98
Bryan Thomas Shealer, '98

WHITIANS

Melinda Chere Albert, '98
Kimberly Algayer, '99
Heather Marie Arnold, '98
Lisa Marie Baganski, '98
Kelley Brewer, '99
Candice Capstick, '99
Christina M. Dappollone, '98
Meera Michelle Domingo, '98
Jamie Eissler, '99
Melissa Forbes, '99
Teresa M. Green, '98
Kristen Griffin, '99

Michelle Grubby, '99
Jacquelyn Hickey, '99
Christine Kenny, '99
Michelle Lynn Landis, '98
Mary Love, '99
Kimberly Madden, '99
Brandace McLachlan, '99
Susan Pauley, '99
Lauren Annetta Steffen, '98
Leslie Strausbaugh, '99
Michelle Lee Underwood, '98
Cara Renée Wright, '98

1998 GRADUATES

Associate in Business Administration

Mark P. Andreyko	Wanda G.G. Kintner
Benita M. Beck	John David Langerhans, '97
Jay Edward Beckley	Margaret A. Manzi
Kathleen Marie Caffarella	Suzan A. Maylath
Karen Davidheiser, '97	Christy Lee Miller, '97
Gina M. DeNicola	Vincent P. O'Brien, '97
David J. Derro	Dante Pietrinferni
Traci Engelhardt	Elizabeth Ann Radford
A. Darlene Gaspar	Bonita O. Seeders
Andrew Henry George	Marianne Shibilski, '97
Laurie D. Green	Robert C. Sweinhart
Michele E. Holloway	John L. Washeleski
Susan Marie Kennedy	Gina M. Zentmayer

BACHELOR OF BUSINESS ADMINISTRATION

Joanne Miriam Beard	Donna L. Abrams Marceau
Lynn M. Benensky	Kelly Dawn Mazzanti
Mirella J. Carbone	William J. McCoskery
Linda Gordy Cartwright	Vivian Leigh McDonald
Clare Elizabeth Cavalcante	John Francis McElwaine, '97
Leah J. Cianfrani	Barbara J. Miller
C. Sophia A. Crocker	Beth J. Miller
Michael S. Degler	Eric F. Miller
Denise M. Denithorne	Susan Toni Pagano
Diana Marie DeVito	Regina Marie Phillips
Roberta L. Fleck	Edna L. Plank
Vincent D. Frigo	John Anthony Romano
Diane Marie Hagerty, '97	Anne E. Sleath Ryan
George J. Hallman III	Patricia A. Stone
Michael A. Hartman, '97	Wendy Jo Tokarski, '97
Kevin Hollingsworth	Derk L. Walters
Kathleen H. Kalinowski	Christina Rae Watkin
Lisa A. Kelly-Schrems	Theresa L. Wickman
Eileen J. Knight	David P. Yanusko
Gina Marie Lubrano	Annette M. Zuber
Kirk Lee Mackey	Richard J. Zulkoski

BACHELOR OF ARTS

Edward Patrick Abbott
 Melinda Chere Albert
 Karen Elizabeth Amichetti
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 Brian John Baily
 William J. Baldini
 Jaylon Baykal
 Ryan Emrys Billheimer
 Joseph Leonard Bond
 Gregory S. Brandley
 Amy Elizabeth Brungess
 Natasha Anne Bzdil
 Matthew E. Caia
 Philip Caiazzo
 Angela Clare Caine
 Jennifer Lynne Calhoun
 Amy B. Canfield
 Joseph Michael Catalfano
 Patrick J. Chilson
 Robert T. Clements
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 Richard A. Colvin
 Laurie Ann Cordes
 Brian D. Creelman
 Dana Lorin Curry
 Christopher Larion Daniluk
 Christina M. Dappollone
 Michael Dennis DellaPorta
 Jon Paul DeMarco
 Jessica Anne Demers
 Tina Marie Elvin Deputy
 Stacey Elizabeth DiBlasi
 Jennifer Lynne DiMario
 Premal N. Doshi
 Heather Dromgoole
 Matthew V. DuBois
 Wayne R. Dudley
 Michael Anthony Fabrizio
 Kelly A. Foster
 Andrea Gagliano
 Andrea Carolina Gaitan
 Charles M. Giamo

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 Denelle Marie Godek
 Ian P. Gordon
 Chelsea Grant
 Teresa M. Green
 Donna L. Grimm
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 Jessica Lynne Haldeman
 Brian M. Hamrick
 Jill Anne Harfman
 Erika Victoria Hauber
 Dorothy F. Hawk
 Courtenay Marie Hess
 Amy Corinne Holler
 Melanie Jeanne Hoover
 Terrence C. Hutchinson
 Fonda Elizabeth Jacobs
 Katherine Lynne Jope
 Brian W. Katits
 Tamara Leigh Klein
 Victoria J. Klopp
 Steven A. Kratz
 Angie Elisabeth Kurtz
 Caroline Elisabeth Kurtz
 Eric M. Lieberman
 Matthew J. MacNeal
 Vanessa L. Margerum
 Denise Ann Martella
 Dennis Cormac McCarthy
 Keith David McCarthy
 Randall J. McDonald
 Mark A. McGonagle
 Kevin O'Rourke McGovern
 Robyn Lynne McGrory
 James McKillip
 Brian J. Meilinger
 Matthew John Miller
 Ryan Nathan Miller
 Amanda Joy Morrone
 Chloe Tehnille Morrioni
 Maryann Moscariello
 William G. Mower

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 Gina N. Narisi
 Lauren Gwynne Newkirk
 Annie Mae O'Connor
 Lisa Ann Olds
 Laura Kathleen Owens
 Anne-Marie Elizabeth Parker
 Tara Jean Patenaude
 Lyndsay Marie Petersen
 Patricia B. Pettine
 Katharine Therese Pinches
 Dennis Michael Prichett
 Jared R. Rakes
 Ethan Silpath Reeves
 Christian Cale Rice
 Douglas T. Rickards
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 Pamela Jane Ruoff
 Rosalie Helen Rutz
 Lawrence Michael Santucci
 Sean Randall Sarles
 Bryan Thomas Shealer
 Nicole Kirsten Shiner
 Taneille Marie Smith
 TerriLynn Smith
 Clementina Spinosa

Andrew Philip Stankus, '97
 Tracy Michele Stanley
 Elizabeth Marie Steckman
 Lauren Annetta Steffen
 Christine Stella, '97
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 Katherine Elizabeth Tompkins
 Paul Andre Tongiani
 Selena M. Trecroce
 Shannon Alexandra Trembl
 Robyn Lynne Turner
 Mark Steven Turney, Jr., '97
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 Michael G. Van Ryn
 Alexis Lea Van Saun
 Patrick John Vesay
 M. Christopher Viner
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 Hera Sue Walker
 James R. Walsh
 Kate E. Weinrich
 Andrew Nathaniel White
 James H. White Jr.
 Toshihide Yagi
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 Anne Hyer Allegger
 Edgar Ronaldo Arevalo Menendez
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 Erin E. Blattner
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 Megan Elizabeth Brown

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 Jeanette L. Clugston
 Susan C. D'Andrea
 Sonia Dayal
 Jeffrey T. de Simone
 Tammy Lynn Dietz
 Megan Marie DiGregorio
 Meera Michelle Domingo
 Matthew M. Doran
 Sarah Ellen Doran

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Dustin T. Eck
 Peter Joseph Evanchik, '97
 Douglas A. Fecteau
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 Randy Arthur Fulweber
 Leslie M. Funair
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 Steven A. Galati
 Brooke S. Garbarino
 Scarlett Gabriel Thoreau
 Geunes-Boyer
 Nicole Elizabeth Gieder
 Melissa Courtney Gilbert
 Jason W. Gill
 Elizabeth A. Gillard
 Janis Michelle Gochoco
 Letitia Danielle Grabowski
 Harold Lee Griffith III
 Carrie Elizabeth Groff
 Filippa Marie Guerra
 Jared Richard Hamilton
 Constance Virginia Hammond
 Stacy LeSara Harden
 William H. Harding III
 Joshua J. Hartle
 Christopher K. Hastie
 Thomas F. Haws, Jr.
 Bee Millicent Arleen Heeney
 Hang Vinh Ho
 Scott Frederick Hofmann
 Andrea S. Hoppel
 Heather Ann Iocca
 Brian Craig Jameson
 Christopher H. Jones
 Monica I. Jushchyshyn
 Vincent P. Kasper Jr.
 Christopher Michael Keleher
 Erin Colleen Kelly
 Sharon Lynn Keppley
 Daniel G. Kiefer
 Wendy Joanne Kilian
 Scott Thomas King
 Stephanie D. Klenk
 Jennifer L. Knebels
 Kevin S. Kochersperger
 John Kominetz, III
 Jennifer Chieko Krouse
 Jessica Beth Krupnick
 Diane Michelle Kuehmstedt
 Angela Lynne Lamb
 Michelle Lynn Landis
 Megan Lea Larkin
 Raun L. Lazier
 Michael Andrew Lease
 Richard E. Leyman
 Nichelle Evette Lightbourn
 Craig Loeb sack, '97
 Edward T. Luberski Jr.
 Danny T. Ly
 Colleen Marie Maloney
 Philip A. Mandato Jr.
 Dana M. Mastrovito
 Colleen A. McBride
 Linda Doris McCleary
 David James Meehan
 Vincent Christopher Milano
 Ondrei Leon Miller, '97
 Amanda K. Mininger
 Christa Mulligan
 Melissa Marie Munyon
 Valerie J. Murray
 Melissa A. Myers
 Philip H. Nagengast
 Brett Matthew Nath
 Daniel John Nibouar
 Corey B. Nice
 Matthew Ethan Norris
 Tara Lynn Oberholtzer, '97
 Shannon A. O'Donnell
 Shawn Albert Ogiba
 Noriko Okabe
 Wagdy Okaily
 Kerim I. Oncu
 Matthew Thomas Onorato

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Alex M. Page
 Marco F. Pagnoni
 Christine Virginia Pili
 Mark A. Pinsk
 Stephanie Maria Piraino
 Jamie Lyn Pontino
 Tarik Farouk Qasim
 Michael William Ritzius
 Emily R. Robles
 Ellana Jeannette Rodriguez
 Joseph John Romano
 Michael Anthony Romello
 Jonathan W. Rundle
 Kelly Schaal
 Alan B. Scholl
 Kristen Elizabeth Schumann
 Melvin D. Schursky, Jr.
 Jill Renee Schweitzer
 Isis M. M. Shanbaky
 Amy Elizabeth Shivery
 Heather M. Sitman

Nathaniel R. Smiley
 Allyson Patricia Smith
 Timothy J. Stalker
 Daniel W. Steigerwalt
 Le Quan Su
 Michael Joseph Sullivan
 Matthew E. Szapacs
 Faith Anne Tate
 Linda Hoai Huong Tran
 Janetta Marie Trecroce
 Patricia Lynn Tucker
 Jennifer L. Turnier
 Michelle Lee Underwood
 Gregory E. Urban
 Jessica L. VanDyke
 Cristin Anne Veit
 Daniel Lee Weinstein
 Victoria Marie Wilkins
 Steven Joseph Wisniewski
 Cara Renee Wright
 Tracey Lynn Zeiler

VALEDICTORIAN

Melissa Courtney Gilbert

SALUTATORIAN

Tarik Farouk Qasim

Summa Cum Laude

Joanne Miriam Beard
 Linda Gordy Cartwright
 Joseph Michael Catalfano
 Jeanette L. Clugston
 Melissa Courtney Gilbert
 Filippa Marie Guerra

Kirk Lee Mackey
 Tarik Farouk Qasim
 Joseph John Romano
 Alan B. Scholl
 Jill Renee Schweitzer
 Victoria Marie Wilkins

Magna Cum Laude

Edward Patrick Abbott
Christina M. Dappollone
Carrie Elizabeth Groff
Jessica Lynne Haldeman
Scott Frederick Hofmann
Kevin Hollingsworth
Brian Craig Jameson
Vincent P. Kasper Jr.
Lisa A. Kelly-Schrems

Daniel G. Kiefer
Victoria J. Klopp
Jennifer Chieko Krouse
Melissa A. Myers
Regina Marie Phillips
Christian Cale Rice
Jonathan W. Rundle
Daniel Lee Weinstein
Tracey Lynn Zeiler

Cum Laude

Heather Marie Arnold
Matthew E. Caia
Michael S. Degler
Meera Michelle Domingo
Sarah A. Fielding
Roberta L. Fleck
Steven A. Galati
Elizabeth A. Gillard
Teresa M. Green
Brian M. Hamrick
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Stephanie D. Klenk
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Patricia A. Stone
Linda Hoai Huong Tran
Janetta Marie Trecroce
Michael G. Van Ryn
Hera Sue Walker
Kate E. Weinrich
David P. Yanusko

Honorary Degrees Conferred:

Cornel West, Professor of Religion and Afro-American Studies at Harvard University, author; *Doctor of Humane Letters*.

H. Craig Heller, '65, Lorry I. Kokey/Business Wire Professor of Human Biology and Environment at Stanford University, *Doctor of Science*.

Betty Umstad Musser, '45, advocate for the arts and liberal arts, member of the Ursinus Board of Directors, *Doctor of Humane Letters*.

The Rev. M. Scott Landis, senior minister, First Plymouth Congregational United Church of Christ, Denver, Colo., *Doctor of Divinity*.

College Calendar for 1999-2000

1999

January	18	Monday	Second Semester begins, 8 a.m.
January	18	Monday	Martin Luther King Day programs
January	29	Friday	Last day to add courses
February	15	Monday	Deadline for freshmen filing financial aid applications (FAFSA/PROFILE)
March	5	Friday	Mid-semester grades due
March	5	Friday	Spring vacation begins, end of classes
March	17	Wednesday	Spring vacation ends, 8 a.m.
March	24	Wednesday	Last day to drop courses without recording a failure
April	1	Thursday	Last day for upper-class students to file an FAFSA/Institutional Verification Form for 1998-99
April	5	Monday	Fall semester registration begins
April	16	Friday	Fall semester registration ends
May	1	Saturday	Last day to file FAFSA for PA State Grant Consideration
May	4	Tuesday	Last day of classes
May	4	Tuesday	Last day to drop a course
May	5	Wednesday	Reading Day
May	6	Thursday	Second semester examinations begin
May	13	Thursday	Second semester examinations end
May	14	Friday	Baccalaureate
May	14	Friday	Alumni Weekend begins
May	15	Saturday	Commencement
May	16	Sunday	Alumni Weekend ends
June	4	Friday	Freshmen orientation
June	11	Friday	Freshmen orientation
August	30	Monday	Classes Begin
Sept.	2	Monday	Labor Day
Sept.	10	Friday	Last Day to Add Classes
Oct.	2	Saturday	Family Day
Oct.	15	Friday	Mid-Semester Grades
Oct.	15	Friday	Homecoming Weekend Begins
Oct.	16	Saturday	Homecoming
Oct.	22	Friday	Fall Break Begins
Oct.	27	Tuesday	Classes Resume
Oct.	29	Friday	Last Day to Drop Classes without F
Nov.	1	Monday	Registration Begins
Nov.	12	Friday	Registration Ends
Nov.	25	Thursday	Thanksgiving Holiday
Nov.	26	Friday	Thanksgiving Holiday
Dec.	10	Friday	Last Day of Classes
Dec.	13	Monday	Final Exams Begin
Dec.	18	Friday	Final Exams Conclude

URSINUS COLLEGE CATALOG

2000

Jan.	17	Monday	Classes Resume
Jan.	17	Monday	Martin Luther King Jr. Day Programs
Jan.	28	Friday	Last Day to Add Classes
Feb.	15	Thursday	Deadline for freshmen filing financial aid applications (FAFSA/PROFILE)
March	3	Friday	Mid-Semester Grades
March	3	Friday	Spring Break Begins
March	15	Wednesday	Classes Resume
March	22	Wednesday	Last Day to Drop without F
April	1	Saturday	Last day for upper-class students to file an FAFSA/Institutional Verification form for 1999-2000
April	3	Monday	Registration Begins
April	14	Friday	Registration Concludes
May	1	Monday	Last day to file FAFSA for PA State Grant consideration
May	2	Tuesday	Last Day of Classes
May	3	Wednesday	Reading Period
May	4	Thursday	Final Exams Begin
May	11	Thursday	Final Exams Conclude
May	12	Thursday	Baccalaureate
May	13	Saturday	Commencement
June	2	Friday	Freshman Orientation
June	9	Friday	Freshman Orientation

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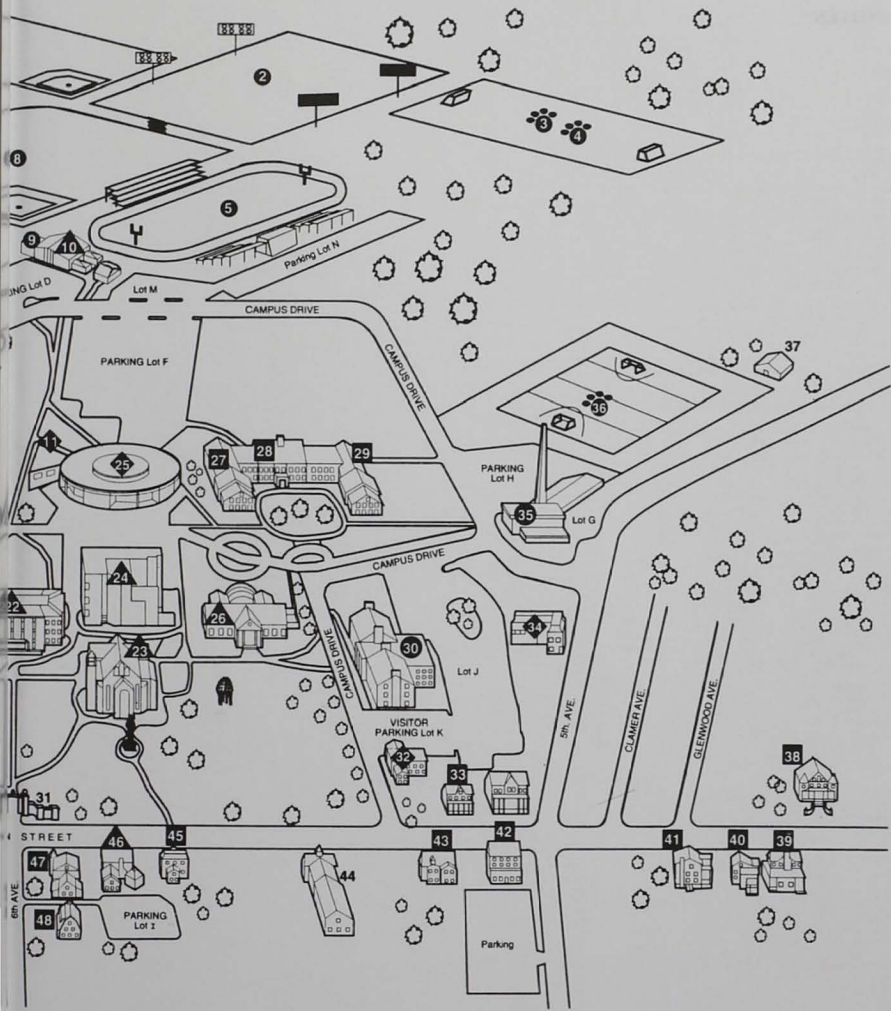
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Key To Legend:

- 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 |
| 1 | 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 | 32 | Keigwin Hall (513 Main) | ▲18 | Pfahler Hall |
| 51 | Duryea Hall (612 Main) | 3 | Lacrosse Field | | Physical Plant |
| 31 | Eger Gateway | 56 | Lynnwood Hall (702 Main) | 2 | Practice Field |
| 15 | Elliot House | 35 | Maintenance Building | 62 | R-Glad House |
| ▲46 | Fetterolf House (554 Main) | | | 12 | Reimert Complex |
| 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 | 6 | Tennis Courts |
| 53 | 624 Main Street | 15 | Thomas Hall
(formerly Life Science) |
| 59 | 732 Main Street | 58 | Todd Hall (724 Main) |
| 16 | 777 Main Street | 44 | Trinity United Church of Christ |
| 50 | Shreiner Hall (600 Main) | 9 | Utility Gym |
| 3 | Soccer Field | 32 | Unity House |
| 1 | Softball Field | 57 | Wicks House |
| 34 | Sprinkle Hall | 20 | Wilkinson Hall |
| 28 | Stauffer Hall | 25 | Wisner Center |
| 37 | Storage Barn | 52 | Zwingli Hall |

URSINUS COLLEGE

P.O. Box 1000 Collegeville, PA 19426-1000
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