# Ursinus College Catalogue for the One Hundred and Sixth Academic Year, 1975-1976 

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# URSINUS COLLEGE BULLET/N 

1975-1976


Ursinus College is located in Collegeville, a borough in Montgomery County, Pennsylvania, twenty-five miles northwest of Philadelphia and just a few miles from the Norristown and Valley Forge exits of the Pennsylvania Turnpike. U.S. Route 422 and Pennsylvania State Highway 29 intersect at Collegeville.

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## URSINUS COLLEGE BULLETIN

Catalog Number

## January 1975

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# URSINUS COLLEGE BULLETIN 

## 1975-1976

## CATALOG NUMBER

For The ONE HUNDRED AND SIXTH ACADEMIC YEAR

## CORRESPONDENCE WITH URSINUS COLLEGE

Communications with the College should be addressed to the appropriate administrative officer.

## GENERAL COLLEGE MATTERS

The President

## DEVELOPMENT

Vice President for Administrative Affairs, Director of Development

## PUBLICITY, PUBLICATIONS

Vice President for Administrative Affairs
ACADEMIC STANDING OF STUDENTS AND REQUESTS FOR TRANSCRIPTS
The Dean of the College

## ADMISSIONS

The Dean of Admissions

## FINANCIAL AID

The Financial Aid Officer

## EVENING SCHOOL, SUMMER SCHOOL

The Director of the Evening School, Summer School

## PAYMENT OF BILLS

The Treasurer's Office
STUDENT EMPLOYMENT
The Financial Aid Officer
PLACEMENT OF GRADUATES
The Director of Placement

## SOCIAL REGULATIONS AND DORMITORIES FOR MEN <br> The Dean of Men

SOCIAL REGULATIONS AND DORMITORIES FOR WOMEN
The Dean of Women
ALUMNI AFFAIRS
Alumni Secretary
The Post Office address is Collegeville, Pennsylvania 19426
The College telephone number is 489-4111 (Area Code 215)
Visitors to the College are welcome. Student guides are available when the College is in session. The offices of the College are open Monday through Friday 9-12 and 1-5. The Office of Admissions, located in the Administration Building (Corson Hall), is open on Saturdays 9-12, but closed on Saturdays from June 15 to Labor Day. Applicants for admission are expected to write for an appointment.

Information regarding highway routes to Collegeville will be found elsewhere in the Catalog.

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## THIS IS URSINUS

## THE COLLEGE IN BRIEF

Ursinus College is an independent, four-year liberal arts college with a tradition of academic excellence reaching back 106 years. It has more than 1100 students, 60 per cent of whom are men. About 900 students are residents in College dormitories. The others live at home and commute from surrounding areas.

Majors are offered in 14 departments, ranging from the classics to sciences. Under a curricular program called The Ursinus Plan, students are given the opportunity to attain academic breadth and still concentrate upon a major.

More than half of the members of the Faculty hold doctoral degrees. Faculty members, who engage in research, are committed first to teaching. Learning takes place in a friendly but challenging environment.

The campus of some 125 acres lies beyond the metropolitan area and is less than an hour from central Philadelphia by high-speed expressway.

In the past few years the physical facilities have undergone a dramatic improvement with the addition of a men's dormitory, library, life science building, administration building and physical education facilities.

Seven of every ten students of the College enter graduate schools. Graduates are leaders in civic and cultural life, and they are found in key positions in industry and the professions. Wherever they are, they bring a special attitude toward life, at once critical and creative, that marks them as Ursinus men and women.

Ursinus College is related to the United Church of Christ and has been church-related since its founding in 1869. The College was established by pastors and laymen of the German Reformed Church, later known as the Reformed Church in the United States, from 1934 to 1957 known as the Evangelical and Reformed Church, and since 1957 known as the United Church of Christ.

## HOW URSINUS BEGAN

The beginning of educational work on what is now the campus of Ursinus College dates back to the construction of a primitive schoolhouse built of logs two centuries ago. The ancient building was razed in 1832 when Todd's School was built in the town of Perkiomen Bridge, now Collegeville. In 1848 Freeland Seminary was opened on a tract adjacent to Todd's School. During the following two decades many hundreds of young men were educated here.

In 1867 a group of men, members of the German Reformed Church,

## URSINUS COLLEGE BULLETIN

actuated by a desire to serve the interests of higher education and of evangelical Christian religion, laid plans to establish a college where, to quote their words, young men could be "liberally educated under the benign influence of Christianity." They chose as the name of the College that of the distinguished sixteenth-century scholar and reformer, Zacharias Ursinus of the University of Heidelberg. In 1869 the charter was granted by the Legislature of Pennsylvania. The buildings of Freeland Seminary were bought, and instruction was begun on September 6, 1870. Women were admitted to the College for the first time in 1881.

Coincident with the founding of the College was the establishment of a preparatory department as a successor to Freeland Seminary. The preparatory school was called Ursinus Academy and was operated as such until 1910, when it was discontinued.

## COLLEGE PRINCIPLES

Ursinus College is a Christian, coeducational, liberal arts college which seeks to help the student to understand and to emulate excellence in scholarship and in conduct. Although in recent decades the College has extended its work to include the preparation of men and women for a variety of professions, the College continues to emphasize the fact that however varied and specialized the changing needs of the day, the fundamental needs of man remain constant. Each student, whatever his field of specialization, is required to study those subjects which are the core of our cultural heritage.

Ursinus recognizes its duty to preserve the cultural and spiritual tradition which this generation has inherited and to transmit a sense of that duty to succeeding generations.
The College seeks to help the students to develop those qualities which will fit them for the extraordinary responsibilities of educated men and women. The purposes of the College are achieved through its curriculum, through the many extra-curricular activities, and through the pattern of campus life.
The whole educational program serves to cultivate a particular set of qualities in the students:
(1) An active intellectual curiosity and a desire to learn
(2) A knowledge of the techniques of sound scholarship
(3) An ability to think logically and critically
(4) A mature understanding of one's self, of others, and of society
(5) An insight into our natural environment, and a knowledge of the laws governing it
(6) An appreciation of our cultural inheritance
(7) A sense of responsibility
(8) Attitudes consonant with the Christian ideal of morality and service

The Constitution of Ursinus College makes it clear that no student who is willing to comply with the rules and regulations of the College shall be excluded from its privileges because of his race or his religion.
Students at Ursinus share the freedom of inquiry and the respect for the individual which are at the heart of a good liberal education. They also share the responsibility for maintaining the order and civility needed for learning and for personal growth. The College expects that when a student decides to enroll, he will abide by all the rules of the College. Should a student find that he cannot willingly obey the rules, the College expects that he will wish to withdraw. The Dean's Office will assist any such student in good standing to transfer to a college of his choosing.
The College reserves the right, through its established procedures, to modify the requirements for admission and graduation; to change the arrangement or content of courses, the texts and other materials used, the tuition and other fees; to alter any regulation affecting the student body; to refuse admission or readmission to any student at any time, or to require the withdrawal of any student at any time, should it be deemed in the interest of the College or of the student.

## CULTURAL ENVIRONMENT

Students at Ursinus have the advantages of living in the country, and at the same time they are close enough to New York and Philadelphia to have access to such additional opportunities for culture as the symphony orchestra, grand opera, legitimate theatres, museums, lectures, and exhibits.
Ursinus is located in the heart of a region which is rich in historical tradition. In Colonial days this region was the center of the cultural and political development of America.

## ACCREDITATION

Ursinus is a member of the Association of American Colleges and is on the approved list of the Middle States Association of Colleges and Secondary Schools, the American Association of University Women, the American Chemical Society, and has been given program approval by the Department of Education of the Commonwealth of Pennsylvania for the certification of teachers.

## DEVELOPMENT

Ursinus is engaged in a ten-year development program (1967-1977) aimed at wide-ranging advancement of the institution in both physical facilities and the academic processes. The first step (1967-1970) gave priority to the raising of funds for urgently needed buildings. In the second step (1970-1975), the CENTURY II Program for Academic Advancement is seeking $\$ 5,450,000$ for enrichment of faculty salaries and student aid, for encouragement of faculty scholarship, for additions to the library collection and for ongoing physical renovations.


## STUDENT LIFE ON CAMPUS

Student life on campus is a kaleidoscope of activities, some formally planned by the many student organizations, others generated by individual students with common interests. The College Union gives coherence and momentum to student social activities. Through its all-student Program Board, the College Union offers a varied cultural, social and recreational program. The College Union serves as a unifying force in the lives of students and encourages an enduring regard for and loyalty to Ursinus.

## ROOMS AND MEALS

Ursinus College is a community and pleasant community life is emphasized. Students who are not living in their own homes are required to room at the College and to take their meals in the College dining rooms.

Each resident student supplies his own towels, pillow, two pairs of sheets for a single bed, mattress protector, a pair of pillow cases, a pair of blankets, and a bedspread. Linen rental service is available.

First-year students, except those whose presence is needed for service, are required to vacate their rooms immediately following the second-term examinations.

## PUBLIC WORSHIP

Voluntary worship services and other religious programs are held on the campus under the direction of the Chàplain of the College. Student religious life centers in the Meditation Chapel, a convenient meeting place for worship and social gatherings in the newly restored Bomberger Hall.

Students are encouraged to attend services on Sunday in the church of their own choice.

## MEDICAL SERVICE

Resident students are entitled to ordinary medical care for minor accidents and ailments contracted while enrolled at the College. All care for the sick is under the direction of the College physicians and their decisions concerning the disposition of cases are final. The College reserves the right to enforce quarantine, and to require the removal from the campus of students who require extraordinary care. Transportation to home or hospital is at the student's expense.

College physicians will consult with students in the College Dispensary during regular office hours and will visit patients regularly who are confined to the infirmary where bed care is provided for up to six days per semester. Bed care in excess of six days in a semester will be charged for at the rate of $\$ 15.00$ per day.

A charge of $\$ 0.50$ will be made for each allergy injection administered by infirmary personnel. Only medication prescribed by licensed physicians will be administered.
During the regular college sessions the nurses are on duty 24 hours a day. Except for extreme emergencies the student seeking medical attention is responsible for reporting to the infirmary for treatment. When emergency treatment is required, the College will make every effort to provide it. The cost of treatment by physicians and nurses not on the College staff is to be borne by the student.

## ACCIDENT AND HEALTH INSURANCE

A student accident and health insurance program is available. Details are available in the Office of the Treasurer. See under Financial Information.

## ATHLETICS

Ursinus recognizes the physical, social, and moral benefit derived from athletic activity and accordingly offers a well-balanced sports program open to all. Men's intercollegiate competition takes place in football, basketball (varsity and junior varsity), soccer (varsity and junior varsity), wrestling (varsity and junior varsity), swimming, cross country, golf, baseball (varsity and junior varsity), track and tennis. In addition to this intercollegiate program, intramural games are played. Intramural athletics for men include touch football, basketball, volleyball, wrestling, softball, track and tennis. Club programs are sponsored in indoor track, sailing, skiing and outing activities.
For women students, the College supports intercollegiate competition in hockey (varsity, junior varsity, third, and fourth teams), basketball (varsity, junior varsity, third, and fourth teams), softball, tennis (varsity and junior varsity), swimming (varsity and junior varsity), lacrosse (varsity and junior varsity), badminton (varsity and junior varsity), gymnastics and volleyball. The intramural program provides additional recreational opportunities in tennis and gymnastics with inter-dorm competition in volleyball and table tennis. Club programs are sponsored in dancing, sailing, skiing, and outing activities.

## ORGANIZATIONS

Students find many opportunities for education and enjoyment through a large number of organizations. All are approved by the Faculty and are supervised by the Committee on Student Activities or the Dean of Men and Dean of Women. In addition, members of the Faculty serve these groups as advisers. Student life on campus is governed by the Ursinus Student Government Association under the direction of the Dean of Men and the Dean of Women. Members of the student governing organization are elected by the student body.

Numerous religious and social activities are planned and sponsored by religious groups under the guidance of the College Chaplain. The evangelical, inter-denominational Ursinus Christian Fellowship offers additional religious perspective to students.

Other organizations stimulate the interest of students in particular areas of study or in future occupations. Among them are the Brownback-Anders Pre-Medical Society, the Beardwood Chemical Society, the Spanish Club, the Pre-Legal Society, G. Leslie Omwake Education Club, Socratic Club, National German Honorary and Social Fraternity, Psychology Club and the Economics Club. Interest in athletics and campus spirit is fostered by the Women's Athletic Association, the Varsity Club, and the Spirit Committee. Psi Chi, the national honor society in psychology, and an affiliate of the American Psychological Association and the Association of College Honor Societies, honors psychology majors whose record is outstanding. Outstanding junior men may be elected to Cub and Key and junior women to the Whitians. Campus Gold is made up of a group of students who work on service projects on the campus and in the community.

A large and varied program of dramatics is sponsored and carried out by Protheatre, which presents two major productions a year in addition to various group productions. There is an Ursinus chapter of Alpha Psi Omega, a national honorary dramatics fraternity.

Music plays a large part in the life at Ursinus. Choral music is represented by the Meistersingers, which offers concerts on and off campus, including a oneweek tour each year; the Ursinus College Choir, which offers a wide variety of literature from popular to major works, and whose annual presentation of Handel's Messiah is an outstanding musical event each year; and I Madrigalisti, a select, special-interest group. Instrumental music is offered by the College Band, both marching and concert, and by the Chamber Orchestra. Most groups include non-student members of the Ursinus community. Finally, there is a chapter of Pi Nu Epsilon, the national honorary music fraternity.
There are 12 local social organizations on the Ursinus campus. The fraternities are Sigma Rho Lambda, Zeta Chi, Alpha Phi Epsilon, Delta Mu Sigma, Beta Sigma Lambda, Delta Pi Sigma, and Alpha Phi Omega, the national service fraternity. The sororities are Omega Chi, Alpha Sigma Nu, Kappa Delta Kappa, Phi Alpha Psi, and Tau Sigma Gamma.

## PUBLICATIONS AND RADIO

The Ursinus Weekly is the Ursinus newspaper. It is managed by a Board of Control consisting of student and faculty representatives and is edited and written entirely by the students. The Editor-in-Chief, the associate editors, and the Business Manager are elected by the board on the basis of merit and the staff is selected by the editors on the same basis. The paper is of interest to students and alumni as a record of life at Ursinus.

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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 member of the Faculty Committee on Student Publications. It is published twice a year.

The Ruby, the Ursinus yearbook, is published by the Senior Class each year. It is a volume presenting an intimate pictorial account of the year's activities, not only of the Class, but of the entire College.

The Ursinus College Bulletin, official publication of the College, appears seven times a year. In addition to the Catalog you are reading, it takes the form of the Ursinus Magazine, the Reports of Officers and the Ursinus Newsletter.

WRUC, the campus radio station, presents each day to Ursinus students a varied agenda of music, from classical to rock, and campus and world news. Special sports events and notable occurrences are broadcast live at certain times during the year. The station is completely student operated.

## THE CAMPUS SETTING

A major building program, undertaken to celebrate the Centennial of the College, in recent years has transformed the Ursinus campus into a modern and highly attractive setting for liberal education.

Wismer Hall, completed in 1965, is one of the chief points of activity on campus. It contains the student dining hall, a lounge, lecture hall and little theatre, language laboratory, and a number of classrooms and seminar rooms. The building led in 1966 to a citation for excellence from the Pennsylvania Society of the American Institute of Architects. It is named for the late Ralph F. Wismer, '05, former Treasurer of the College and member of the Board of Directors.

Bomberger Memorial Hall, built in 1891, provides classrooms for many courses in the humanities, languages and social sciences. It also houses the College chapel, study and recreation areas. This Romanesque hall, made of Pennsylvania blue marble, is named for the first President of Ursinus, Dr. J. H. A. Bomberger. The building was made possible by the benefactions of Robert Patterson. After extensive restoration, it re-opened in the fall of 1973.

Pfahler Hall of Science, built in 1932, is named in honor of Dr. George E. Pfahler, famed radiologist. It houses classrooms and laboratories for work in chemistry, physics, mathematics and geology. The building is equipped with the Elihu Thomson Memorial Telescope for astronomical observation. The development plan of the College brought extensive renovation of the building in 1971, and the expansion of Chemistry, Mathematics and Physics Departments into areas formerly occupied by Psychology and Biology, now located in the Life Science Building.

The Life Science Building opened for use in September 1970. Along with the Myrin Library and the physical education building, completed in 1972, it was financed by a special All-Ursinus Anniversary Drive that coincided with the College's 100th year. As the new home of the Psychology Department and of the Biology Department, it complements Pfahler Hall of Science. Both departments have been enabled to improve laboratory work in regular courses and to offer better opportunities for independent student research. It is the new home of the following endowed laboratories: Levi Jay Hammond Laboratory of Comparative Anatomy, the W. Wayne Babcock Laboratory of General Biology, the Anna Heinly Schellhamer Laboratory.
The Myrin Library, completed and occupied in 1970, has study facilities for 500 persons and a capacity of over 300,000 volumes. The collection numbers about 110,000 volumes, not counting government documents and pamphlets. The Library receives over 700 periodicals, newspapers and serials. The location of Ursinus College in the Philadelphia area makes available for special studies the vast bibliographic holdings of this area through personal consultation or inter-library loan.

In 1964 the Library began acquiring the Early American Imprints, now nearing completion, which comprise every title printed in America up to 1820. These imprints, together with files of periodicals and newspapers, constitute the nucleus of the micro-form collections of the Library, which now contain over 86,000 units.

The library also houses an extensive collection and bibliography of Pennsylvania Dutch culture, gathered under the auspices of the Pennsylvania Folklife Society, which is affiliated with Ursinus College.

An important feature of the Myrin Library is the Grumman-Dartmouth Time-Sharing computer center, opened in 1974. The center makes available to students the enormous capability of the Dartmouth College computer system. It consists of a number of teletype units that permit real-time interaction with the computer.

Corson Hall, the Administration Building, named in honor of Philip L. Corson, a member of the Board of Directors, and his wife, Helen Payson Corson, was dedicated in the spring of 1970. Located near the main entrance to the campus, it houses the Admissions Office, where candidates for entrance to the College make application. The main administrative offices are found here, in addition to a classroom and offices for some sixteen faculty members.
The D. L. Helfferich Hall of Health and Physical Education and The William Elliott Pool were dedicated October 21, 1972, Founders' Day, in honor respectively of the ninth president of Ursinus College, who now serves as Chancellor, and Dr. William Elliott, Board member, neighbor and benefactor of the College.

The new physical education complex serves both men and women with three full-size basketball courts, one of them a multi-purpose section; locker rooms and team rooms; wrestling room; apparatus room; dance studio; classrooms; and a regulation collegiate-sized swimming pool.
Thompson-Gay Gymnasium, built in 1927, doubles as a free-play and intramural sports setting and a theatre. The building is a memorial to Robert W. Thompson, '12, and George H. Gay, '13, noted Ursinus athletes, both of whom died in their senior year at the College.

During construction of Helfferich Hall and The Elliott Pool, many outdoor playing fields and facilities were relocated and refurbished. Chief among these was Price Field, named for Dr. John Price, '05, one of the great athletes in Ursinus history; Price Field complex includes the soccer field, baseball diamond, softball diamonds and football practice ground.
A second hockey field was installed to supplement the Effie Brant Evans Hockey Field at the east end of campus near Stauffer Hall. An outdoor shuffle board court converts in winter to an outdoor ice skating rink. Eight tennis courts are located behind Helfferich Hall.

Varsity football games and track and field meets take place at Patterson Field, named for the College's first benefactor, Robert Patterson. An eight-lane all-weather track is installed around the field.
In the spring of 1973, the College Union opened a new chapter in the social life of the campus. Designed as "the living room of the campus," the College Union is in the old Alumni Memorial Library building, built in 1922. It includes large social lounges, a recreational area in the basement, meeting rooms, a snack shop and offices for student groups.
Other structures include Super House, a residence on Main Street opposite the campus, bequeathed to the College by the late Henry W. Super, D.D., L.L.D., Vice-President and Professor of Mathematics, 1870-1891, and President, 1892-1893; Sprankle Hall, on the east campus fronting Fifth Avenue, the infirmary; The Eger Gateway, erected through the generosity of George P. Eger, of Reading, Pennsylvania, at the entrance of the walk leading from Main Street to Myrin Library, The College Store and The Power Plant, a strikingly modern building put into operation in 1963.

## DORMITORIES FOR MEN

The Brodbeck and Curtis Dormitories for Men are buildings in English Colonial style. Each building has four floors. They bear the names of esteemed benefactors of the College, Andrew R. Brodbeck and Cyrus H. K. Curtis.

Wilkinson Hall, which connects Brodbeck and Curtis Dormitories, provides a lounge for men as well as additional rooms for men. It was erected through the generosity of Mr. and Mrs. Joseph C. Wilkinson.

## STUDENT LIFE ON CAMPUS

Maples, 512 Main Street; Omwake Hall, 701 Main Street; and Isenberg Hall, 801 Main Street are all residence halls for men.

Fircroft, 930 Main Street, a residence for men students, was presented to the College by Miss Sara E. Ermold as a memorial to her mother, Ella N. Ermold.

The Men's Dormitory Complex at the north end of campus, completed in 1968, houses 252 men. The main building is Reimert Hall, named in honor of the late Dr. William D. Reimert, '24, President of the Board of Directors of the College from 1961 until his death in 1969. The Dean of Men's Office is located on the first floor of Reimert Hall.

## DORMITORIES FOR WOMEN

Paisley Hall, Stauffer Hall and Beardwood Hall are three dormitories for women. The buildings house 243 women and are located on the east campus.

Hobson House is located at Sixth Avenue and Main Street. It is used as a residence for twenty-four women.

Shreiner Hall, fronting on Main Street and facing the College campus, is a residence hall for twenty-eight women.

Duryea Hall, 612 Main Street, is a residence hall for fifteen women.
Clamer Hall, Main Street, the gift of Dr. Guilliam H. Clamer, is a residence hall for twenty-five women.

777 Main Street, 942 Main Street and 944 Main Street are residence halls for nine, nine and sixteen women, respectively.

Keigwin Hall is a residence for ten women.
Olevian Hall, 640 Main Street, is a residence hall for ten women.
Schaff Hall, 646 Main Street, is a residence hall for ten women.
South Hall, Sixth Avenue, is a residence hall for fifteen women.
Todd Hall, 724 Main Street, is a residence hall for seventeen women.

## SHIPMENT OF BELONGINGS

The Maintenance Department will accept Railway Express shipments at the Maintenance Department between the hours of 8 A.M. and 4.30 P.M., Monday through Friday, providing:

1. the maintenance Department has been notified in writing when to expect the shipment and from whom;
2. the shipment arrives prepaid.

The Maintenance Department can accept no responsibility for the condition of the shipment.


## ADMISSION

The first step in seeking admission to Ursinus College is to file an application. A form for this purpose may be obtained from the Office of Admissions. After the completed form has been returned to the College, accompanied by the fifteen-dollar application fee, the applicant should then request his principal or headmaster to send an official transcript of the applicant's secondary school records for the ninth grade through at least the first marking period of the senior year, including class rank, personality rating, and recommendation.

All applicants must arrange for a personal interview on campus, unless, of course, the distance makes such a visit impracticable. This requirement must be completed before the application is presented to the Committee on Admissions.

Applications for financial aid should be filed at the time the candidate applies for admission. Forms are available through the Office of Admissions.

It is the responsibility of the candidate to make arrangements to take the Scholastic Aptitude Tests of the College Entrance Examination Board and to have the test results sent to the Dean of Admissions.

## TESTS

Candidates for admission to the Freshman Class are required to take the Scholastic Aptitude Tests. Foreign students must, in addition, take the TOEFL test. It is recommended that applicants take the November or December Scholastic Aptitude Tests in the senior year. Although not required, Achievement tests are strongly recommended, especially in English Composition and mathematics. Full information concerning the dates of administering these tests can be obtained by writing directly to the College Entrance Examination Board, P.O. Box 592, Princeton, New Jersey 08540.

## PREPARATION

A candidate for admission to the Freshman Class must be a graduate of an approved secondary school.

If the applicant is a graduate of a four-year high school he should offer for admission at least sixteen units which are to be distributed as follows:

```
BASIC ACADEMIC CREDITS (10 units)
English, Four years, Four Units
Elementary Mathematics (Algebra and/or Geometry) Two Units
Science, One Unit
Social Studies, One Unit
Foreign Language, Two Units in One Language
ADDITIONAL ACADEMIC CREDITS (at least 21/2 Units)
Advanced Mathematics
Solid Geometry
Plane Trigonometry
Science
Social Studies
Foreign Language
ELECTIVES (Maximum 31⁄2 Units)
Not more than one unit will be granted for any single elective.
Bookkeeping
Drawing (Mechanical, Prepared Course)
Geology
Stenography
Junior Business Training
Music and Art (History or Appreciation)
Commercial Law
Commercial Geography
```

If the candidate is a graduate of a three-year high school, he should offer at least twelve units, which should include the basic credits above. Not more than one unit may be presented from the group designated as electives.

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 Committee on Admissions, they are qualified to do college work satisfactorily.

## EARLY ADMISSION

A limited number of outstanding juniors who have completed all or nearly all requirements for graduation from high school may be considered for early
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 high school diploma either before or upon successful completion of the freshman year in college.
The admissions process is identical with the following EARLY DECISION procedure.

## EARLY DECISION

Outstanding juniors may apply for admission in the late spring or during the summer preceding the senior year. The applicant should have his counselor send a transcript for the ninth through eleventh grade together with class rank, personality rating, and recommendation. He should also have junior year Scholastic Aptitude Test scores sent and arrange for an interview, preferably prior to October 1 . We strongly recommend that all candidates take Achievement tests. Early decisions will be made and applicants notified in the late summer and early fall.

## SPECIAL PROGRAM FOR HIGH SCHOOL STUDENTS AND SENIOR CITIZENS

Area high school juniors and seniors and those 62 years of age and over may take regular courses for half-tuition during summer, fall, or spring terms, both day and evening. Information is available in Office of Admissions.

## ENGINEERING PROGRAM

Arrangements have been made with the Engineering Schools of the University of Pennsylvania, the University of Southern California, and the Georgia Institute of Technology, to which a student may transfer after completing three years of prescribed work toward the B.A. degree at Ursinus College.
Ursinus College will grant the B.A. degree after the student has satisfied the requirements for that degree. The engineering school will grant the engineering degree on satisfactory completion of the fifth year. For the outline of the program see Suggested Programs.
The candidate for the Engineering program must present 4 years of entrance credit in Mathematics.

His background in foreign language must be such that he will be capable of entering the second year of language in college. If he is not so prepared he must make up the deficiency in foreign language in summer school.

## PLACEMENT IN FOREIGN LANGUAGES

If an entering student wishes to study in college the same language he studied in high school, the following conditions apply:

If a student has taken two or three years of a foreign language in high school he must enroll in the intermediate level of that language in college. If he is unable to master the work at the intermediate level, he may drop back to the elementary level, but only with the permission of his instructor.

## ADVANCED PLACEMENT

Students who wish to be considered for advanced courses upon admission may submit the results of the Advanced Placement Examinations as 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 Dean of Admissions 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 Dean of Admissions to take a course at another college.

## COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

Another means by which incoming students may earn advance credit is through the College Level Examination Program (CLEP). These are examinations offered by the College Entrance Examination Board as a means by which colleges may offer advance 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. Applicants interested in the CLEP Program should write for a CLEP Bulletin of Information for Candidates to the Program Director, CollegeLevel Examination Program, Box 1821, Princeton, New Jersey 08540.

## SPECIAL STUDENTS

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

## TRANSFER STUDENTS

To enter the Sophomore or Junior Class at Ursinus College, an applicant must support his application by requesting each institution he has attended subsequent to graduation from secondary school to send to the Dean of Admissions a transcript of his record at the institution of higher learning and a letter from the Dean of Men or Women indicating that the applicant is entitled to honorable dismissal insofar as character and personality are concerned. It will be helpful if the candidate will send a catalog of the college he has been attending, marked to indicate the course he has taken. There will be no credit for grades below C.

Not more than sixty hours of work taken elsewhere will be credited to students transferring to Ursinus College.

## PART-TIME STUDENTS

Non-resident students who are candidates for a degree and who wish to pursue fewer than twelve hours of work may be classified as part-time students upon the written approval of the Dean of the College.

## NOTIFICATION OF ADMISSION

When a candidate for admission is notified of his acceptance by the College, he must make an advance payment of one hundred dollars in accordance with the provisions of the letter of acceptance. This payment is credited on his bill for the first term. If he fails to complete his matriculation, the payment is forfeited.

## THE SUMMER SCHOOL

The curriculum of the Summer School is announced in the Spring, and information concerning course offerings is released after April 15. In the day sessions, courses are offered over a period of 12 weeks. A student carries only one course at a time but may enroll for a full program. The plan permits the completion of a three-semester-hour course in three weeks, two three-semes-ter-hour courses in six weeks, four three-semester-hour courses in twelve weeks and two four-semester-hour courses in eight weeks. It is possible to carry two years of work in a language in twelve weeks for twelve semester credits.

In the evening sessions, three-semester-hour courses meet two evenings a week for $71 / 2$ weeks. Two courses may be carried simultaneously. However, a student may not be enrolled in the evening session if he is also enrolled in either of the first two day sessions.

Ursinus College Summer School (day or evening) is open to candidates who may be classified in the categories below upon approval of the Director.

1. College Graduate (two-year and four-year).
2. Degree Candidates (Bachelor and Associate), including recent high school graduates accepted as freshmen by Ursinus or other accredited schools.

Applicants from other institutions must have written permission from their respective institutions indicating that they will be given transfer credit for successful work in the courses selected.
3. Evening School students at Ursinus or elsewhere, with a high school diploma and with a minimum of 15 semester hours of work successfully completed (equivalent of 70 average).
Applications of those whose qualifications do not fit the above categories must be acted upon by the Committee on Admissions.

Ursinus College Summer School (day or evening) is not open to the following:

1. Students who were not graduated from approved secondary schools.
2. Students who have been dismissed or suspended from any academic institution during the previous academic year.
Admission to the Summer School does not carry with it an assurance of transfer to degree standing at Ursinus College. For information and application forms, address the Director of the Summer School.

## THE 3+3 PROGRAM

Through the $3+3$ Program, a student may be graduated in three instead of four years. Under this program, an entering freshman takes two or more courses in the Summer School before starting the initial fall session. He must then take enough courses in the next two Summer School sessions to bring the summer total of credits up to 30 semester hours. The year saved by taking courses in three years and three summer sessions is especially useful to those planning on graduate work. In addition, because Summer School tuition is less than that for regular sessions, total costs for a degree are reduced. For information and advice on the $3+3$ Program, address the Dean of the College.

## THE EVENING SCHOOL

The Evening School is organized to make college work available to men and women employed in business, in industry and teaching, and to others who may be interested. The degree programs generally emphasize courses in business administration and economics, but a strong liberal arts component is required. A considerable range of courses in English composition, English literature, history, mathematics, foreign languages and other disciplines is available.

Full-time Ursinus students enrolled in the College may register for Evening School courses, with permission of their advisors and the Dean of the College. Evening School registration procedures must be followed.

For information, catalog, and application forms, for both Summer and Evening Schools, address The Director, Evening School, Ursinus College, Collegeville, Pa.

## CAREER OPPORTUNITIES

Ursinus is a college of liberal arts and sciences and emphasizes a broad, general education regardless of the career for which a student plans to prepare. At the same time, it is possible at Ursinus to prepare for specific careers in the fields listed below. A placement service maintained by the College helps the student to find a position in the field of his choice.

BUSINESS. Graduates in Economics and other departments are employed by many types of industrial concerns, banking institutions, public utilities, transportation companies, department stores, chain stores, etc. By electing languages, students majoring in Economics may prepare for the growing opportunities in world trade.

CHEMICAL RESEARCH: INDUSTRIAL CHEMISTRY. The College provides opportunities for students desiring to major in Chemistry with a view to devoting their lives to some type of chemical research. Graduates find employment in the chemical industry doing pioneer work in the field of chemical research and development.

DENTISTRY. Many graduates of the College have entered the field of dentistry. Ursinus provides the basic science program prescribed by the Council on Education of the American Dental Association.

EDUCATIONAL ADMINISTRATION. Basic courses in Education are provided which are prerequisite to the professional courses in Educational Administration offered in graduate schools of education of leading universities.

ENGINEERING. Students who wish to study Chemical, Civil, Electrical, Mechanical or Metallurgical Engineering may avail themselves of a program which is being offered at Ursinus College in cooperation with engineering schools. A student at Ursinus College may transfer to an engineering school after completing three years of prescribed work toward the B.A. degree at Ursinus.

Ursinus College will grant the B.A. degree after the student has satisfied the requirements for that degree. The engineering school will grant the engineering degree upon completion of the fifth year.

FOREIGN SERVICE. The American foreign service presents attractive opportunities to a limited number of young people who are willing to prepare themselves adequately for service abroad. The history and social science courses, together with offerings available in the modern languages, provide preparation for the examinations required of applicants for positions in foreign service. Upon graduation students are urged to pursue additional work at a recognized graduate school.

GRADUATE STUDY. One purpose of the curriculum of the modern liberal arts college is to prepare students for advanced study in various fields of knowledge. Preliminary study is done by the student at the undergraduate level in his chosen major field. Those intending to enter graduate schools should have a thorough grounding in their chosen field. As a reading knowledge of French and German is essential for most higher degrees, this knowledge should be acquired in the undergraduate school.

HEALTH AND PHYSICAL EDUCATION. It is possible to specialize in health and physical education and at the same time obtain a general cultural education. Health and physical education graduates meet the requirements for certification to teach in this field in Pennsylvania and other states.

JOURNALISM. A student interested in journalism should enroll in the departments of history, political science, or English and elect widely in other fields. A year at a professional school of journalism is recommended.

LAW. Leading law schools require a baccalaureate degree as one of the conditions for acceptance of candidates. A broad, cultural education is considered the best preparation for legal study. A major in such departments as history, psychology, or political science is recommended.

MEDICINE. Concentration in biology or chemistry is recommended in order to prepare students who are interested in the various aspects of medicine. Preparation for schools of osteopathy and of veterinary medicine, as well as for the regular medical schools, is provided. Students should also investigate the opportunities in the allied medical fields, such as occupational and physical therapy, in which many opportunities are being offered.

MUSIC. Although a considerable number of courses in music are available at Ursinus, no major in music is offered. Those who wish to follow music as a career should plan to attend graduate school after completing their work at Ursinus.

NURSING. Students who plan to enter the profession of nursing should register for courses in biology, chemistry, and liberal arts in order to qualify for consideration by schools of nursing. Ursinus does not give a degree in nursing but recommends transfer, after two years, to a university school of nursing.

PHYSICAL RESEARCH. A program of concentration in physics and mathematics is offered to students interested in physics as a career.

PSYCHOLOGY. Undergraduate work in psychology is designed for those who seek admission to graduate schools or who wish to enter personnel work in industry. Undergraduate study in psychology is of assistance in the fields of teaching, guidance, law, clinical psychology, personnel and social work, nursing, and preparation for medicine.

SOCIAL WORK. A professional career in social work requires two years of graduate education in one of the approved schools of social work associated with a number of universities. There are, however, many opportunities for the untrained person holding a baccalaureate degree to find employment in both public welfare and voluntary social agencies; the former is entered through civil service examination. Positions are open in
work with individuals and with groups. Many of these situations offer funded plans for graduate study upon satisfactory completion of a year of employment.

TEACHING. Secondary school teaching preparation which meets the requirements of the State Department of Education in Pennsylvania and of many other states is offered to those who look forward to a career in education. Ursinus offers programs for secondary school certification in English, French, Spanish, German, Latin, Mathematics, Mathematics-Physics, Biology, Chemistry, Physics, General Science and Social Studies. Students seeking certification in Social Studies will specialize in Economics, History, Political Science, or Psychology. Advisers should be consulted in each of these areas early in the student's college career. The program for certification for Health and Physical Education covers both the elementary and secondary fields. Students should follow the curricula which have been approved by the Pennsylvania Department of Education, a copy of which is in the hands of the advisers.

CHURCH VOCATIONS. Most leading theological schools have as a requirement for consideration for admission a degree in liberal arts. Students who are preparing for church vocations should plan a broad course of study which will include history, languages, literature, religion, and philosophy.

## PLACEMENT BUREAU

Ursinus College conducts a placement bureau to assist students and graduates in finding positions for which they qualify. Its function is to serve as a point of contact for seniors and alumni with educational institutions, business, and industry. Detailed personal and scholastic records of seniors and alumni are compiled and are available for all prospective employers.

Alumni Placement-The Placement Bureau cooperates with the Alumni Office in the placement of alumni who are seekıng new positions in business and industry.

Alumni who are teachers and who wish to seek employment or new positions are also served by the Placement Bureau.

## THE COLLEGE YEAR

The College year at present consists of two semesters of sixteen weeks each and a summer session of twelve weeks. Students are admitted to the College at the beginning of either semester or at the beginning of the summer session. Those who wish to accelerate their college program may attend the summer session in addition to the Fall and Spring semesters. The summer session is available to all students who wish to take advantage of it.


## FINANCIAL INFORMATION

## TUITION, BOARD, FEES

## STUDENT CHARGES PER YEAR

Tuition ..... \$2330
Room and Board ..... \$1170
Activities fee ..... \$ 20
College Union fee ..... \$ 25
PAYMENTS ARE TO BE MADE AS FOLLOWS:
New Students
Advance Payment-as requested ..... \$ 100
Breakage Deposit-As indicated on bill ..... \$ 50
Old StudentsAdvance Payment-July 15\$ 100
All StudentsSeptember-One-half annual charges, lesscredit for Advance Payment.One-half Activities and College Union Fees.
January -One-half annual charges.One-half Activities and College Union Fees.

Charges quoted are made on an annual basis. Billings are presented semi-annually and are due for payment in September and January, no later than the date indicated on the billing. A $\$ 10$ fee is charged for late payment.
When the student is a recipient of an Ursinus College scholarship award, credit will be applied in the amount of one-half the value of the annual award to each semester bill. THE COLLEGE HAS NO PLAN FOR INSTALLMENT PAYMENTS.
For those who prefer to pay tuition in monthly installments, the College offers special arrangements made with the Girard Bank of Philadelphia, the Insured Tuition Payment Plan of Boston and/or The Tuition Plan. These arrangements should be made early enough to assure payment of bills no later than the date indicated on the billing.

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## EXPLANATION OF CHARGES

APPLICATION FEE. A fee of $\$ 15$ is paid by the candidate at the time he files his application. This fee is not refundable and is not applied toward the student's bill.
Special and Part-Time Students are charged at the rate of $\$ 75.00$ per semester hour. If registered for twelve or more hours, full tuition will be charged.

ADVANCE PAYMENT. (a) Upon his acceptance by the College an applicant must make an advance payment of $\$ 100$. This payment is credited on his bill for the first term. If he fails to complete his matriculation, this payment is forfeited. (b) All regularly enrolled students must make an advance payment of $\$ 100$ at such time as may be designated by the College. This payment is forfeited if the student fails to complete his registration.

FEE FOR TUITION covers classroom instruction, use of libraries, gymnasium, and the infirmary; ordinary medical attention; care by the resident nurse. Room and Board charges cover lodging for school year, exclusive of Thanksgiving, Christmas and Spring recesses.
The College reserves the right to make reasonable adjustments in the comprehensive fee at the beginning of any term to cover possible unforeseen costs.

ACTIVITIES FEE is charged to all full-time students, and to all Special and PartTime Students enrolled for six or more semester hours of credit. This fee covers subscription to the Ursinus Weekly, intercollegiate debating, the Christian Associations, the Ursinus College Forum, admission without further charge to all athletic contests at the College, to College dances, and use of College athletic facilities as scheduled.

COLLEGE UNION FEE. All students enrolled in the College pay a fee of $\$ 12.50$ per semester which supports the operation of the College Union program and the maintenance of the College Union Building, and includes membership in the College Union for the period covered by the fee.

STUDENTS' MEDICAL INSURANCE PLAN. A twelve-month medical coverage for accident and sickness is available at nominal cost.

ROOM DRAWING. A previously enrolled student must pay $\$ 10$ in order to qualify for drawing a room. Credit for this amount will be applied to the charge for Room and Board for the following term, and is forfeited if the student fails to complete his registration.

[^1]other orchestra or band instrument. This charge is for one half-hour lesson each week during the regular college year and is payable as billed.
SCIENCE FEE. $\$ 100.00$ per semester: All students majoring in Biology, Chemistry, Physics, Pre-Engineering and Freshmen who are enrolled in Undesignated Natural Science. $\$ 25.00$ per semester: All Sophomores, Juniors and Seniors majoring in Psychology.
FINE ARTS FEE. A fee of $\$ 15$ per semester is charged for students enrolled in Fine Arts $3 \& 4$.

BREAKAGE DEPOSIT. A deposit of $\$ 50$ is required of each new student to defray expense incurred by damage to College property. This is included in the bill for the first term. Billings are rendered as assessments are made against the deposit balance. Any unexpended balance is returned upon graduation or withdrawal from the College.

STUDENT TEACHING. An additional fee of $\$ 75$ is required of each student engaged in student teaching. This is payable upon presentation of the bill.
GRADUATION FEE. A graduation fee of $\$ 25$ is charged each student on the last bill of his senior year. An additional deposit of $\$ 25$ will be required for the use of cap, gown, and hood. This deposit will be refunded upon return of the equipment.

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 Dean.

SPECIAL EXAM FEE. A fee of $\$ 10$ is charged students who take an exam on days other than when scheduled.

ID CARD FEE. A charge of $\$ 1.00$ is made for the issuance of an ID card. If the card is lost a charge of $\$ 5.00$ will be made for its replacement.

CHANGE OF STATUS FEE. When a student changes his status from day to resident a new ID card must be issued, for which there is a $\$ 5.00$ charge.

## REGULATIONS

Bills for student fees are issued approximately thirty 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.

A student who is absent from College because of sickness and retains his place in class pays student fees in full during his absence, except that when the absence is continuous over a period exceeding four weeks, resident students are allowed a rebate of $\$ 10$ for each full week on account of table board.

No refund is allowed because of a student's dismissal or withdrawal from the College during a term, except when the student enters the armed services.

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

The possession or use of alcoholic beverages, illegal drugs or firearms on the campus is forbidden.

Students who have attained an 80 cumulative average in the preceding year may operate a motor vehicle or maintain one on campus or in the College vicinity while in attendance at College. A vehicle may not be operated or maintained by students who hold financial grants or positions under the Bureau of Student Employment. This does not apply to students who are commuting.

Students who marry must notify the College of their change in status.
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 not be refunded in whole or in part. Other regulations and procedures of vital concern to students are contained in the pamphlet, Ursinus College Rules and Customs.

## SCHOLARSHIPS AND FINANCIAL AID FINANCIAL AID OFFICE

The Financial Aid Office, in cooperation with the Office of Admissions, administers financial assistance to students. The sources of Ursinus College aid funds are permanent scholarship funds, current operating income, Federal student aid programs, state aid programs, as well as other corporate and private sources.

## HONORS UPON ENTRANCE

Honors upon entrance are conferred by the President of Ursinus College upon those incoming Freshmen who present outstanding academic entrance credentials. These awards carry no stipend.

## CENTENNIAL SCHOLARSHIPS

In honor of the thousands who have worked for and served her so faithfully during her first century, Ursinus College each year grants Centennial Scholarships, in amounts which vary according to need, to those freshmen whose records and scores clearly indicate that they are outstanding students.

These scholarships are subject to yearly review and may be renewed if the holder's scholastic work and conduct remain satisfactory and financial need continues.

## PRESIDENTIAL SCHOLARSHIPS

The President of Ursinus College may confer scholarships each year on those students who have demonstrated outstanding leadership, service, and ability during their secondary school or college years. These awards may be granted to incoming freshmen or upperclassmen and may be renewed for continued service to Ursinus College.

## FINANCIAL GRANTS

Financial grants are awarded for one year on the basis of financial need. Ursinus College participates in the College Scholarship Service (CSS) of the College Entrance Examination Board. Participants in CSS subscribe to the principle that the amount of financial aid granted a student should be based upon financial need. The CSS assists colleges and universities and other agencies in determining the student's need for assistance.

Applications for scholarships and grants must be filed by February 1, on forms available from the Office of Admissions.

Entering students seeking financial assistance are required to submit a copy of the Parents' Confidential Statement (PCS) by February 1 to the College Scholarship Service, designating Ursinus College as a recipient. The PCS may be obtained from the secondary school or the College Scholarship Service, P. O. Box 176, Princeton, New Jersey 08540, or P. O. Box 1025, Berkeley, California 94704.

All financial grants are reviewed annually. Eligibility for renewal is based upon relative need, satisfactory conduct, and the maintenance of the required scholastic average.

Upperclass students wishing assistance or the renewal of an existing grant are required to submit a new Parents' Confidential Statement (PCS) to the College Scholarship Service. A PCS may be obtained from the Financial Aid Office and should be filed by February 1.

Students receiving aid from sources outside the College are required to report the amount to the Financial Aid Office. The College reserves the right to adjust previously offered Ursinus grants and awards accordingly.

## PERMANENT SCHOLARSHIP FUNDS

The College possesses a number of permanent scholarship funds. The income of each fund is assigned annually to a student designated by the College.

## STUDENT EMPLOYMENT AND COLLEGE WORK-STUDY PROGRAM

The Bureau of Student Employment, conducted by the College, provides opportunity for a student to earn a part of his expenses by working as a waiter, laboratory assistant, library assistant, typist, or clerk in the College

Store. These positions are standardized so as not to overburden the student or to interfere with his studies. Positions accepted under the Bureau of Student Employment must, however, always take precedence over any other extra-curricular activities. A standard position, such as that of waiter in the dining room, pays approximately four hundred dollars per year. Approximately two hundred positions, representing varying amounts of compensation and types of work, are now open to students.

Students are employed on a contractual basis. Earnings may be applied directly to the student's account at the end of each semester of work or the student may be paid on the bi-weekly payroll.

Letters of application, as well as those requesting information, should be addressed to the Director of Financial Aid.

## FEDERAL EDUCATIONAL OPPORTUNITY GRANTS

Basic Educational Opportunity Grants: These grants will average $\$ 450$ and will be available to freshmen, sophomore, and junior students in 1975. Applications may be obtained from high school guidance officers, U.S. Post Offices or Ursinus College.

Supplemental Educational Opportunity Grants: These grants may not exceed $\$ 4,000$ for the undergraduate years. They are for students "of exceptional financial need," as determined from the Parents' Confidential Statement.

## STATE SCHOLARSHIPS

All students in need of financial assistance are urged to consult their guidance counselors for information abqut state scholarships, and to be sure to make application for state scholarship help.

## NATIONAL MERIT SCHOLARSHIPS

Ursinus College sponsors four National Merit Scholarships each year. These scholarships are awarded through the National Merit Scholarship Corporation and are open to any National Merit Finalist who has selected Ursinus College as his first choice. The awards do not limit in any way the number of finalists who may be sponsored by other contributing organizations. Application should be made to the National Merit Scholarship Corporation through the secondary school.

## STUDENT LOANS

National Direct Student Loan Program: Loans up to $\$ 1,250$ per year not to exceed $\$ 5,000$ for undergraduate study are available. Need for the loan must be substantiated by a Parents' Confidential Statement. Application forms are available from the Financial Aid Office.
Guaranteed Loan Program: This program is administered by the Pennsylvania Higher Education Assistance Agency in Pennsylvania and by similar state agencies or the United Student Aid Funds, Inc. in other states. The
maximum loan ranges from $\$ 1500$ to $\$ 2500$ per year depending upon the state and the student's year in college. Total loans for undergraduate work may not exceed $\$ 7500$. Federal interest subsidy is available to families who meet prescribed Federal eligibility requirements. The family desiring to apply for interest subsidy must file a Parents' Confidential Statement. Loan application forms should be available at your local bank or state agency.

## TUITION EXCHANGE PROGRAM

Ursinus College is a member of the Tuition Exchange. Requests of children of Faculty members of other member institutions for tuition remission will be considered upon application. Because of the necessity for maintaining a balance of imports and exports, it may not always be possible to honor such requests. Applications for tuition remission should be made through the liaison officer of the institution with which the applicant's parent is associated. Those who receive aid through the Tuition Exchange Program are not eligible for additional grants.

## EDUCATIONAL PROGRAM

The departmental system is employed in the organization and administration of instruction. By this system, the courses of instruction are offered in fourteen departments: Biology, Chemistry, Classical Studies, Economics, English, German, Health and Physical Education, History, Mathematics, Philosophy and Religion, Physics, Political Science, Psychology, Romance Languages. The adviser is the medium of communication between the Faculty and students of his department. The approval of the adviser is necessary before a student may register for or enter upon any course of study, or discontinue any work.

A student, at matriculation, chooses the subject of major concentration he wants to pursue, and with the advice and consent of the adviser selects his studies for the year and reports his selection to the Dean on a blank provided for the purpose. A student who is uncertain of his future plans, and therefore undecided about his major field, may choose to be registered in an "Undesignated major" for the first year; but he must designate the broad choice of Humanities, Social Sciences, or Natural and Physical Sciences.

It has become necessary to limit the number of students in scientific programs. In order to follow a curriculum in Science, a candidate must indicate his intention to do so upon application for admission to the College. If the student applies for and is admitted to a program in the Humanities, Social Sciences, or Languages, he may subsequently transfer to a program in the Sciences only upon approval of the Committee on Standing. Request for change in Major should be addressed to the Dean of the College.

## SUMMER READING PROGRAM

In order to stress the importance of good reading and to develop the student's appreciation of good writing, the Faculty has approved the Program in Summer Reading which is recommended for all students. It begins with the summer preceding the freshman year and continues through succeeding summers. The paper-bound volumes assigned for reading are mailed to the student upon his request. These books are discussed formally and informally during the early weeks of the first semester.

## CHOICE OF STUDIES

The work of every student is composed of three parts: (1) courses which are, in the judgment of the Faculty, essential to a liberal education and are required of all students before graduation; (2) courses required by the department in which the student is registered, and which comprise his major field of concentration; (3) elective courses chosen by the student as a means of further individualizing his course of study, and adapting it to his own intellectual tastes and future purposes. (See Ursinus Plan.)

## SERVICE ACTIVITIES

The College, through many of its departmental major programs as well as through student organizations, strongly encourages students to participate in community activities and projects. Many students volunteer their services as tutors or as part-time aides at nearby hospitals, schools, and welfare organizations. These services provide valuable field experience to supplement classroom work.

## REGISTRATION

All students must register at the beginning of the Fall Term for the work of the Fall and Spring Terms. Changes in course of study may be made during the first week of a term with the written approval of the adviser. After the first week, courses may be added or dropped only by joint permission of the Dean, the adviser, and the instructors involved A student who withdraws from a course without such permission will receive the grade of $F$. A fee is charged for the adding or dropping of courses on days other than those appointed in the College Calendar.
In registering, the student must present to his department adviser his complete list of studies, both prescribed and elective, for the whole year. Courses prescribed as degree or departmental requirements or to satisfy conditions must take precedence over and be scheduled before elective courses. When a student changes to another major department, he must fulfill the requirements of that department in order to be graduated.

## REQUIREMENTS FOR GRADUATION

The requirement for the degree of Bachelor of Arts or Bachelor of Science is the completion of one hundred and twenty semester hours which must include all the courses required by the Faculty of all students for graduation and the courses required by the department to which the student belongs. At least sixty semester hours of this work must be completed at Ursinus College, and this must include the work of the senior year.
To qualify for a Bachelor of Arts or a Bachelor of Science degree, a student must be registered in the College, not the Evening School, for a minimum of 60 semester hours of credit at Ursinus.
A regular student may not take in any one term fewer than twelve semester hours of work. The normal maximum for a term is five courses or fifteen

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semester hours. Two semester hours above the normal maximum may be scheduled with the approval of the adviser. Three semester hours above the normal maximum may be scheduled with the approval of the adviser, provided the student's average for the preceding term is eighty-five or higher (Exception: Engineering and Physical Education majors are permitted to schedule in each term three hours more than the normal maximum). All fourth-year students shall enroll as full-time students.
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 his requirements for graduation.

## USE OF LANGUAGE LABORATORIES

The language laboratory is used regularly in either or both of the first two years in languages according to a schedule posted early in each academic year. The laboratory hours are required in addition to the regularly-scheduled class meetings. There is no semester-hour credit for language laboratory.

## 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:
Each student is expected to exercise reasonable judgment regarding class attendance. Every student is accountable for all work missed because of class absence. Instructors, however, are under no obligation to make special arrangements for students who are absent. A student for whom an academic warning is issued in a course must limit his future absences in that course to the number of times that the course meets per week. If the student then exceeds the allowed number of absences, he will be dropped from the course and be assigned a grade of F unless the Dean, after consultation with the instructor, permits the student to be reinstated. A reinstatement fee of $\$ 10.00$ will be charged.

A first-year student 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 $F$.

## GRADES OF SCHOLARSHIP

When a course has been completed, the standing of the student is expressed, according to his proficiency, by one of five grades: A, B, C, D, or F. Letter A denotes grades between $100 \%$ and $90 \%$, B between $90 \%$ and $80 \%$, C
between $80 \%$ and $70 \%, \mathrm{D}$ between $70 \%$ and $60 \%$, and F denotes $45 \%$. Any grade of less than $60 \%$ denotes a failure in the course. Students who have received passing grades are not permitted to take re-examinations for the purpose of raising their grades.

The mark I, which may be given only with the written permission of the Dean, is reserved for cases of incomplete work or of failure under extenuating circumstances. When the removal of the mark I requires an examination, a fee of ten dollars ( $\$ 10.00$ ) will be charged. If the mark of $I$ is not removed within one month after the beginning of the following regular term, the grade F will be assigned for the course.

A student is required to have an average of $70 \%$ at the end of each term in College. A student who fails to do so may be restricted in his extracurricular activities, and will be reported to the Faculty.

A student whose average at the end of the first term or second term is below $65 \%$, whose cumulative average is below $65 \%$ at the end of the first year, or whose cumulative average is below $70 \%$ at the end of the third term or thereafter will be dropped from the College unless, as a result of mitigating circumstances, the Faculty votes that he be permitted to continue. The action of the Faculty in all such cases is final.

Employment under the Bureau of Student Employment is not allowed to a student whose average for the preceding term is below $70 \%$. A student under discipline may be barred by the Committee on Discipline from all extra-curricular activities.

Through correspondence and conferences, the cooperation of parents is sought in the endeavor to obtain the best possible results in the work of students.

Any student may be dismissed from the College for cause by the Faculty, regardless of the student's academic average.

## DEGREES

Ursinus College confers three degrees in course: Bachelor of Arts, Bachelor of Science, and Bachelor of Business Administration (Evening School only). For specific requirements of the curricula leading to each of these degrees, see Departmental Requirements and the catalog of the Evening School. Degrees are conferred only at convocations and candidates must present themselves in person.

A student in good standing who has earned a minimum of ninety 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 his 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.

## HONORS

## 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 entire course may be graduated with distinction if, in the opinion of the Faculty, their attainments warrant such honors. These distinctions, Summa Cum Laude, a cumulative average of 94.50 or above; Magna Cum Laude, 92.50 to 94.49 ; and Cum Laude, 89.50 to 92.49, are given only for unusual excellence in all the subjects pursued by the candidate. Graduation Honors will be based on the student's cumulative average at the end of the first seven (7) terms of college studies.

## DEAN'S HONOR LIST

All regular or full-time students achieving an average of 87.50 for a semester are announced at the end of that semester as members of the Dean's Honor List. It is an Ursinus tradition for the Dean of the College to read at the Founders' Day Convocation in November the names of those students who have been carried on the Dean's Honor List for the preceding two semesters.

THE CHAPTER
The Chapter, a society of faculty members with Phi Beta Kappa membership, is especially concerned with cultivating the arts and sciences at Ursinus College.

Each year The Chapter designates certain seniors as "Chapter Scholars" on the basis of the quality and range of their intellectual interests and attainments.

SOCIETY OF THE SIGMA XI
The Society of the Sigma Xi, 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 limited to Juniors, Seniors, and Faculty. Election is held once a year, the nominations coming from faculty members.

## PI GAMMA MU

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 January 1, 1950. Election to the society is based on academic achievement in the social sciences. Election of eligible Juniors and Seniors is held once a year, the nominations coming from faculty members.

## JUNIOR YEAR ABROAD

An Ursinus College Student may spend the Junior Year at a foreign university, provided that he has maintained an average of 85 at Ursinus College and, in the opinion of the Dean and the Faculty, will be a worthy representative of the College and will profit from this experience. The course of study abroad must be approved at the time that permission is given. An examination covering the year's work mav he renuired bv the department chairman upon the student's return. Upon evidence of successful completion of the program, a maximum of fifteen (15) credits per term will be given for studies pursued in a program abroad.
Ursinus College is a member of the United Colleges for Foreign Study and Exchange. This organization is committed to a multilateral sponsoring of study opportunities at foreign institutions and aims to maintain academic standards which are comparable to those in effect on the local campus. At present the agency makes possible the participation of Ursinus students in programs in England, France, Germany and Mexico. In addition, a consultative service is provided, which furnishes information regarding foreign study opportunities in various other countries of the world. Detailed information concerning the opportunities afforded and the qualifications for participation may be obtained from the Dean.
The College sponsors its own program of travel and study in France and Spain for a limited number of students during the summer. Information may be obtained from the Chairman of the Romance Languages Department.

## FOREIGN STUDENTS

A Foreign Student, under guidance of the Foreign Student Adviser, is usually classified by the College as a Special Student, at least for his first year. He may then be admitted to degree candidacy for subsequent years. Although facility in understanding spoken English will be a requisite for admission, a foreign student would do well to arrive in the United States before the opening of the college year in order to become familiar with American English. A "homestay" of one month as arranged through the Experiment in

## URSINUS COLLEGE BULLETIN

International Living, Putney, Vermont, U.S.A., is highly recommended to anyone whose native tongue is not English. Further information can be obtained directly from the organization. A foreign student whose native language is not English will be considered to have fulfilled the foreign language requirement for graduation.

A foreign student should make sure that his visa is valid for more than a single entry into the United States, since on vacation trips he may wish to cross the borders into Canada or Mexico.

All foreign students who wish to apply to Ursinus College are required to take the Test of English as a Foreign Language (TOEFL). For information, write to TOEFL, Box 899, Princeton, New Jersey, USA, 08540.

No foreign student should arrive at the Ursinus campus until all credentials are complete and he has received a formal letter of acceptance.

Dormitories and dining halls are not in operation during college holidays.
Transportation should be arranged via Philadelphia to Collegeville. Foreign students may telephone the Foreign Student Adviser at 215-489-4111 if they need assistance.

## THE URSINUS PLAN



A Pivotal, Radial, and Complementary<br>Program of Liberal Education<br>in a World Setting<br>at a Four-Year College

I. Curricular Program
A. Divisional Groupings of Course Offerings

Language Division
Humanities Division
Social Science Division
Science and Mathematics Division

1. Pivotal Courses: Breadth in Liberal Education. Selection of required representative courses from each Division.
2. Radial Courses. Further breadth in Liberal Education. Selection of Elective courses assuring distribution among Divisions not related to the Student's Major.
3. Departmental Courses and Departmental Honors. Depth in Specialty.
4. Interdepartmental Courses of Study.
B. Senior Symposium and College Honors.
5. Symposium. Open to all Seniors. Students are enabled to integrate their particular departmental interests collectively in dealing with current issues.
6. College Honors. Open to exceptional Students. Guided independent study.
II. Complementary Program
A. Cultural Activities
B. Student Activities
C. Physical Activities

In the fall of 1966, the students at Ursinus College began their participation in the URSINUS PLAN, subtitled "A Pivotal, Radial, and Complementary

## URSINUS COLLEGE BULLETIN

Program of Liberal Education." The College has always placed emphasis upon a broad liberal arts background, and the URSINUS PLAN provides even greater breadth, depth and freedom of choice. Learning takes place beyond the classroom, the lecture hall, and the laboratory; challenging and varied perspectives on learning itself are revealed by new groupings of related disciplines and course offerings.

Implicit in the URSINUS PLAN are four divisions, all of which are vital to the Liberal Arts student, who must learn the importance of pursuing and discerning truth through several methods of inquiry. These divisions are Language, Humanities, Social Science, and Science and Mathematics. Thus, all students at Ursinus College select certain Pivotal Courses, at least one from each division. These Pivotal Courses introduce the student to the characteristic subject matter and intellectual viewpoint of the particular division. In addition, each student elects a minimum of twelve credit hours of Radial Courses, chosen from a division or divisions outside the area of his departmental major. These Radial Courses add further breadth to the understanding gained from the Pivotal Courses. Every student is required to take a minimum of one full year of a foreign language beyond the introductory level while at Ursinus.

All students are also encouraged to participate in complementary activities, which, while not required, are nonetheless understood to be an integral part of the learning process. These activities provide many opportunities for social, educational, and cultural enrichment.

Finally, under the URSINUS PLAN all students may participate in the Senior Symposium, which provides them with an opportunity to integrate their various departmental specializations into the context of the world into which they are to be graduated, a world in which no one perspective on truth can be said to deal adequately with all the issues which they will encounter in these complex times. The Senior Symposium, with its unique emphasis upon guided independent study and interdisciplinary analyses of problems, heightens the perspectives of all who participate.

Exceptional students are given a further opportunity to pursue special interests in depth through the present program of Departmental Honors, as well as through the College Scholars' Program, which is open to Sophomores, Juniors, Seniors, and qualified Freshmen in their second term.

Thus, in various ways and at several levels, the URSINUS PLAN provides the industrious and the gifted student alike with a course of study in which will be found all kinds of learning, general and specialized, required and elective, theoretical and practical. The Plan opens the way to an education which is truly liberal and establishes a firm basis for continuing intellectual growth.

## PIVOTAL COURSES

Each student, regardless of his choice of major and of his Department Requirements, is required to take the following Pivotal Courses:

## LANGUAGE DIVISION:

Unless exempt in the manner prescribed, every student is required to take ENGLISH COMPOSITION 101, 102, and TWO FULL YEARS OF A FOREIGN LANGUAGE (to the 203, 204 level or one full year beyond 204). FOREIGN LANGUAGE choices include courses in Classical Studies, Germanic and Slavic Languages, and Romance Languages.

Exemption from either English Composition or two years of a foreign language will be granted to those students who give evidence of having achieved proficiency in English Composition or in a foreign language comparable to that expected of students engaged in the same studies at Ursinus College. Proficiency will be measured by scores attained in Advanced Placement Examinations or the appropriate Achievement Test of the College Entrance Examination Board, or by an examination devised by the departments concerned. Each department will determine the level of proficiency required.

## HUMANITIES DIVISION:

Every student is required to take one of the following full-year sequences of courses: HISTORY 101, 102; PHILOSOPHY 101, 102; WORLD LITERATURE; or COMPARATIVE WORLD CULTURES*.

## SOCIAL SCIENCE DIVISION:

Every student is required to take one of the following full-year sequences of courses: PSYCHOLOGY 101, 108; ECONOMICS 101, 102; POLITICAL SCIENCE 101, 102; or SOCIOLOGY 101, 102.

## SCIENCE AND MATHEMATICS DIVISION:

Science majors are required to take the sequences recommended by departments. Non-Science majors are required to take one of the following full-year sequences of courses: Biology 101, 102; Chemistry 101, 102; Physics 101, 102 or Geology 101, 102.
*Here and elsewhere courses marked (*) have been recommended by the Faculty of Ursinus College, but may not be offered in 1975-1976.

## URSINUS COLLEGE BULLETIN

## RADIAL COURSES IN NON-MAIOR DISCIPLINES

Every student shall elect twelve (12) credit hours of Radial Courses offered by one or more Departments in one or more Divisions in which his own departmental major is NOT found. Election of Radial credit hours can be made from the following courses:

Language Division:
Advanced English Composition
Classical Studies
Dramatic Arts
Germanic Languages
Speech
Romance Languages
Humanities Division:
English Literature
Fine Arts
Foreign Literature
History
Music
Philosophy-Religion

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Social Science Division:
    Anthropology
    Economics
    Education 202,444
    Geography
    Political Science
    Psychology
    Sociology
Science and Mathematics Division:
    Biology
    Chemistry
    Geology
    Health & Phys. Ed. 132m 132w
    Mathematics
    Physics
```


## DEPARTMENTAL COURSES

(See Departmental Requirements for each major)

## COLLEGE SCHOLARS' PROGRAM

Qualified Freshmen in their second term, Sophomores, Juniors and Seniors may earn up to nine credits (not more than three per semester) by pursuing guided independent research as Research Scholars or by working in subjects not in the regular college curriculum as Independent Students.

1. To qualify for either section of the College Scholars' Program, the candidate must have achieved a semester average of 85 during the semester immediately preceding.
2. A student may in this way fulfill his requirements for three credit hours of Pivotal or up to nine credit hours of Radial courses. Each semester of passing work in the programs will carry three semester credits.
3. A student may work for no more than one semester in the Department of his Academic Major.
4. The Divisions of the Program are Natural Sciences, Languages, Social Sciences, and Humanities.
5. In the Research Scholars' Program, the candidate must prepare a brief prospectus outlining his research project which meets the approval of his Academic Adviser and of the College Scholars' Committee of the faculty.

He must then prepare his research paper under the supervision of a Tutor and must participate in two seminar meetings per semester, designed to bring him into contact with the other Scholars working in the same Division of the Program. His work will be graded by the College Scholars' Committee, which will assess the merits of his research paper and his performance at an oral examination, which will be attended by his Tutor and when feasible by an outside authority in the student's field. His Academic Adviser will also be invited to attend.
6. In the Independent Study Program, the candidate must prepare a prospectus stating what subject he wishes to study and what materials he hopes to use. This prospectus must be approved by his Academic Adviser and by the College Scholars' Committee of the faculty, which may consult the head of any Department logically concerned. The student must submit to the College Scholars' Committee a course outline approved by his Tutor before the end of the second full week of the semester. The student, his Tutor, and the Committee will then meet to determine an appropriate format for his final report and examination. Independent Students will also be required to participate in the seminar meetings of the Program. The Independent Student will be graded by the Committee on the basis of the course plan agreed upon at the outset, with the Tutor devising and administering the final examination, oral or written, as in any regular course.

## DEPARTMENTAL HONORS

Students may be graduated with special honors in their own or other departments of study in which they have shown exceptional proficiency, subject to the following regulations:

1. To be admitted to candidacy for Departmental Honors, a student must have the endorsement of the Chairman of the Department in which he wishes to pursue the program, file the written approval in the Dean's Office, and register during the Spring pre-registration period of his Junior year.
2. A candidate must have a minimum cumulative average of $B-$ in all courses taken throughout the first three years of college, and a minimum average of $B+$ in all courses taken in the department in which he seeks honors.
3. Upon consent of the adviser a candidate may be exempt from a threehour course in his own department.
4. The Project Adviser will assign a grade for the project and may recommend Departmental Honors. If the candidate receives a passing grade, he will earn three semester credits toward graduation, even though his work may not be recommended for Departmental Honors.
5. In order that the Faculty may consider the awarding of Honors, the candidate shall deposit his completed thesis, together with a written recom-

## URSINUS COLLEGE BULLETIN

mendation from his adviser, in the Office of the Dean by April 20 preceding the Convocation at which the Departmental Honors are to be awarded.

## INTERDEPARTMENTAL COURSES OF STUDY

A student whose major interests span two or more recognized academic fields and who during his sophomore year maintains a cumulative $B$ average may arrange a specialized major which combines these fields, such as Biophysics, Biopsychology, American History and Literature, Comparative Literature.
In order to set up such a specialized major, the student and the department heads of the involved departments 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, with whose approval it may be signed and filed in his office.
Upon successful completion of the major requirements so specified, the student will graduate in the subject field specified on his program proposal.

## SENIOR SYMPOSIUM

The Senior Symposium is a cooperative teaching enterprise with an emphasis on discussion and dialogue among students, faculty, and visiting specialists from different disciplines.
The first semester's work consists entirely of independent reading and periodic conferences with a Tutor. Selected readings, conference discussions, and an oral examination comprise the first semester. The second semester's work concentrates on the major issues confronting Americans today. The Symposium meets twice a week for one and one-half hours. Approximately one-half of this time is devoted to lectures, panels, and question periods, followed by discussions to further the student's inquiry into the issues at hand.

## COMPLEMENTARY PROGRAM

## COMPLEMENTARY CULTURAL ACTIVITIES

Every student is encouraged to participate in cultural activities at Ursinus College. The activities are planned in a four-year cycle of emphasis. They include the FORUM series, the SUMMER READING program, academic CONVOCATIONS, and related activities such as FIELD TRIPS to museums, and other complementary activities.

## COMPLEMENTARY STUDENT ACTIVITIES

Every student is encouraged to participate in those student activities which provide opportunities for integrating perspectives and content of several

## THE URSINUS PLAN

disciplines and courses within the four divisions. While students are not restricted to participation in activities related to their divisional or departmental fields, the following listing will assist students in seeing those relationships:

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Language Division:
    French Club
    German Club
    Spanish Club
    Debating Team
Humanities Division:
    YM-YWCA
    Meistersingers
    Messiah Chorus
    Ursinus College Band
    Protheatre
    Ursinus Weekly Staff
    Lantern Staff
    Ruby Staff
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Social Science Division:<br>Economics Club<br>International Relations Club<br>Intercollegiate Conference on Government<br>Psychology Club<br>G. Leslie Omwake Education Club<br>Ursinus Student Government Association<br>College Union Program Board<br>Science and Mathematics Division:<br>Beardwood Chemical Society<br>Brownback-Anders Pre-Medical Society<br>Mathematics Club

## COMPLEMENTARY PHYSICAL ACTIVITIES

Every student is required to take PHYSICAL EDUCATION 101, 102, unless he is a Physical Education Major or is otherwise excused. In addition, every student is encouraged to participate in the activities of organizations such as the Outing Club, and to engage in intramural as well as varsity sports.

## COURSES OF INSTRUCTION

The system used in numbering courses reflects in general the year of the college in which many students schedule a course. Thus a course taken in the first year normally will begin with the numeral 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 prerequisites or other considerations for enrolling are stated in the course description.

In designating courses of study, odd numerals are employed to indicate the courses offered during the Fall Term and even numerals the work of the Spring Term. Exceptions to this regulation are noted. Summer Term offerings are not announced in this catalog, but so far as possible, courses will be offered to meet the needs of students who register for the Summer Term.

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

## 003-ANTHROPOLOGY

DR. J. MILLER
003-201. INTRODUCTION TO ANTHROPOLOGY DR. MILLER
Archaeology, physical anthropology, and the nature of culture. Three hours per week. Three semester hours.

003-202. INTRODUCTION TO ANTHROPOLOGY
DR. MILLER
Continuation of course 001. Three hours per week. Three semester hours.

## 005-BIOLOGY

ASSOCIATE PROFESSOR ALLEN
ASSISTANT PROFESSOR SMALL
ASSOCIATE PROFESSOR HOWARD ASSOCIATE PROFESSOR KRUSE

This Department aims, through the study of a number of fundamental aspects of Biology as a science, to foster the scientific attitude in its students, and to provide for its majors a background for graduate work in Biology and for professional preparation in the several fields of medicine and other health services. The Department also participates in a program leading to Teacher Certification in secondary schools, as described below.

Students majoring in Biology must take a minimum of 28 semester hours of Biology, including Bioligy 111, 112; 314; 319; 321 and 423. Electives are to be selected from other departmental course offerings at the 200, 300 and 400 levels. Chemistry 111, 112; Physics 111, 112 and Mathematics 111, 112 are required of all majors. Chemistry 207, 208 is required of all majors who are not in the Teaching Program (see below). Students interested in graduate programs in the biological sciences are advised to elect additional courses in Mathematics, including Mathematics 213, 214.

## COURSES OF INSTRUCTION

## Teaching Program (Major in Science, concentration in Biology)

This program is designed for prospective secondary school teachers whose principal interest is Biology and who wish to be certified in Biological Science.

The following courses are prescribed by the Department of Biology: Chemistry 111, 112; Physics 111, 112; Mathematics 111, 112; Biology 111, 112; 317, 318; 321; 322; 415; 314 or 319.

The curriculum of students beyond the first year must be arranged in consultation with the Chairman of the Department of Education. For sequence of courses, see Concentration in Biology at the back of the catalog.

005-101. GENERAL BIOLOGY (ZOOLOGY)
DR. SMALL
Introduction to principles of structure, function, and development of living things as revealed in a study of selected animal types. Two hours of lecture; one two-hour laboratory period per week. Three semester hours.

005-102. GENERAL BIOLOGY (BOTANY)
DR. SMALL
Introduction to principles of structure, function, and development of living things as revealed in a study of selected plant material. Two hours of lecture; one two-hour laboratory period per week. Three semester hours.

Courses 005-101 and 102 of General Biology are not open to Biology majors but may be taken by other students to satisfy the college requirements for graduation.

## 005-111. GENERAL BIOLOGY

DR. ALLEN
A consideration of the general principles operative in the natural world through the study of representative types of organisms and the medium of experimentation. General topics include the metabolism, genetics, development and structure of living systems. Prerequisite or Corequisite, Chemistry 111, 112 or equivalent. Two hours of lecture; four hours of laboratory per week. Four semester hours.

005-112. GENERAL BIOLOGY
DR. ALLEN
A continuation of Biology 111. General topics include physiology, ecology and evolution of living organisms. Prerequisite, Biology 111; Prerequisite or Corequisite, Chemistry 112. Two hours of lecture; four hours of laboratory per week. Four semester hours.

Courses 005-111 and 112 are the basic introductory courses prescribed for all Biology majors and for any others who are planning to meet the various preprofessional requirements in the health sciences.

## 005-314. COMPARATIVE ANATOMY

DR. HOWARD
Comparative anatomy and phylogeny of the chordates, with emphasis on the vertebrates. Comparative laboratory dissections of shark, amphibian and mammal. Prerequisite, Biology 112. One hour of lecture; two three-hour laboratory periods per week. Four semester hours.

## URSINUS COLLEGE BULLETIN

005-316. ADVANCED BOTANY
DR. SMALL
A phylogenetic survey of diversification in the plant kingdom, stressing principles of morphology, taxonomy and ecology. Field trips center upon the taxonomy of local Angiosperms. Prerequisite, Biology 102 or 112. Two hours of lecture; one three-hour laboratory period per week. Three semester hours.

Biology 005-316 is required for those who intend to apply for certification in Pennsylvania as teachers of Comprehensive Science and is strongly recommended for students in a preveterinary program.

005-317. HUMAN ANATOMY AND PHYSIOLOGY
MRS. SHINEHOUSE
A study of the characteristics of cells and tissues, and of the muscular, skeletal and nervous systems. Emphasis is placed on the integration of structure and function. Prerequisite, Biology 101 or 111; or permission of the instructor. Two hours of lecture; one two-hour laboratory period per week. Three semester hours.

005-318. HUMAN ANATOMY AND PHYSIOLOGY
MRS. SHINEHOUSE
A study of the structure and function of the sense organs, and of the circulatory, respiratory, urinary, digestive, endocrine and reproductive systems. Prerequisite, Biology 317; or permission of the instructor. Two hours of lecture; one two-hour laboratory period per week. Three semester hours.

005-319. VERTEBRATE EMBRYOLOGY
DR. ALLEN
The origin, morphogenesis and early development of vertebrate tissues, organs and organ systems. The physical and chemical aspects of cell and tissue differentiation. Prerequisite, Biology 112. Two hours of lecture; five hours of laboratory per week. Four semester hours.

005-321. GENETICS
DR. HOWARD
A survey of the basic principles of classical, biochemical and population genetics. Prerequisites, Biology 101, 102 or 111, 112. Three hours per week. Three semester hours.

005-322. EVOLUTION
DR. HOWARD
Lectures and discussions explaining the history of living things in space and time. Assigned readings and papers. Open to all students. Two hours per week. Two semester hours.

005-341. RESEARCH
STAFF
Scientific literature research with the preparation of a final report concerning some biological phenomenon of interest to the student. Prerequisites, Biology 112 and written consent of a staff member who will serve as research adviser, presented at the time of preregistration. One semester hour.

005-342. RESEARCH
STAFF
Content and prerequisites as in Biology 341, but offered in the spring term. One semester hour.

## COURSES OF INSTRUCTION

Scientific literature research with the preparation of a final report including an original analysis or project design. Prerequisites, Biology 112 and written consent of a staff member who will serve as research adviser, presented at the time of preregistration. Two semester hours.

005-352. RESEARCH STAFF

Content and prerequisites as in Biology 351, but offered in the spring term. Two semester hours.

005-415. ECOLOGY
DR. HOWARD
Studies of the interrelationships among organisms and their environment, with emphasis on field investigations. The following principles and concepts are stressed: adaptation, parasitism, population dynamics, the community, succession and energy relations. Prerequisite, Biology 102 or 112 . Two hours of lecture; one three-hour laboratory period per week. Three semester hours.
NOTE: Students who register for Biology 415 must keep Saturdays free for all-day field trips.

005-422. HISTOLOGY
DR. ALLEN
A study of the structure of vertebrate tissues and their integration into organs and organ systems. An introduction to histological technique. Prerequisite, Biology 112; or permission of the instructor. Two hours of lecture; five hours of laboratory per week. Four semester hours.

005-423. MICROBIOLOGY
DR. KRUSE
The structural, cultural and physiological characteristics of microorganisms and their role in the economy of nature. The principles of immunity, serology and virology are also considered. Prerequisite, Biology 112; or permission of the instructor. Two hours of lecture; one two-hour laboratory period per week. Three semester hours.

005-424. BIOCHEMISTRY
DR. KRUSE
Chemistry and intermediate metabolism of proteins, lipids, carbohydrates and nucleic acids; energetics of biological compounds; chemistry of photosynthesis, digestion, absorption, assimilation and excretion. Prerequisite, Chemistry 208. Two hours of lecture; one two-hour laboratory period per week. Three semester hours.

005-425. CELLULAR PHYSIOLOGY
DR. KRUSE
A study of the phenomena involved in cell growth, maintenance, self-regulation and in the general behavior of protoplasm. Prerequisites, Biology 112; Chemistry 208, 309 or 316. Two hours of lecture; four hours of laboratory per week. Four semester hours.
NOTE: Enrollment in Biology 425 is limited to 16 students. A minimum of 6 students is required for the course to be offered.

## URSINUS COLLEGE BULLETIN

005-426. VERTEBRATE PHYSIOLOGY
DR. KRUSE
A study of the general principles of the functional mechanisms that underlie the life processes of vertebrates. Prerequisites, Biology 112; Chemistry 208. Two hours of lecture; four hours of laboratory per week. Four semester hours.
NOTE: Enrollment in Biology 426 is limited to 20 students. A minimum of 6 students is required for the course to be offered.

005-435. SEMINAR
STAFF
Papers, reports and/or independent research concerned with selected phases of biological knowledge. Topics to be chosen by the instructor in charge. Prerequisites, Senior standing; Biology 314 or 319; 321; Chemistry 208; or permission of the instructor. One hour per week. One semester hour.

005-436. SEMINAR STAFF
Comparable to Biology 435, but using different material. Prerequisites, Senior standing; Biology 314 or 319 ; 321; Chemistry 208; or permission of the instructor. One hour per week. One semester hour.

055-451. RESEARCH STAFF
Library and laboratory research with the preparation of a final thesis. An original laboratory analysis of some biological phenomenon and presentation of results in a student-staff seminar. Prerequisites, Biology 112 and written consent of a staff member who will serve as research adviser, presented at the time of preregistration. Three semester hours.

005-452. RESEARCH
STAFF
Content and prerequisites as in Biology 451, but offered in the spring term. Three semester hours.

NOTE: A normal maximum of three semester hours of credit will be applied to any combination of research courses. Students who wish to add one additional hour of research credit by a combination of Biology 341 or 342 with Biology 451 or 452 must obtain special permission from the Chairman of the Department.

## 010 - CHEMISTRY

PROFESSOR STAIGER
ASSOCIATE PROFESSOR SCHULTZ
ASSOCIATE PROFESSOR KRUSE ASSISTANT PROFESSOR BARTH

ASSOCIATE PROFESSOR HESS
MRS. SHAW
VISITING PROFESSOR LEVESQUE

The courses of study offered by the Chemistry Department are (1) to provide a course in general chemistry which will satisfy the requirements of the College for a laboratory science; (2) to provide training in chemistry for students planning to teach; (3) to provide more than the minimum training for students planning to become technicians in medical laboratories, and for pre-dental and pre-medical students; (4) to offer sufficient specialized training in chemistry beyond the basic courses that

## COURSES OF INSTRUCTION

will enable a graduate to enter a career as a professional chemist; and (5) to prepare students for graduate training.

Students whose principal interest is Chemistry will select a degree of concentration consistent with their vocational objective.

One of the following programs must be selected.

## I. Chemistry Major

All students planning to become professional chemists should enroll in the following program, which is approved by the American Chemical Society for undergraduate professional training in Chemistry.

The following courses are prescribed: Chemistry 111, 112, 203, 304, 306, 207, 208, 309, 310, 311; Mathematics 111, 112, 231; Physics 111, 112; 204 or Biology 101, 102. The following are recommended as electives: Chemistry 405, 312, 413, 430; Physics 207, 208; German 203, 204, 311, 312; Mathematics 232.

## II. Concentration in Chemistry - Preparation for Allied Fields of Science

This program is designed for degree-seeking students planning for graduate work or admission to professional schools in the healing arts (medicine, dentistry, veterinary medicine, etc.) or specialization in chemistry in preparation for further study in such areas as pharmacology, clinical chemistry, and environmental science. Another language may be substituted for the German recommended in Program 1.
The following courses are prescribed: Chemistry 111, 112, 203, 207, 208, 309, 310; Physics 111, 112; Biology 111, 112; Mathematics 111, 112, 231. The following are recommended as electives: Chemistry 405, 306, 321, 424.

## III. Teaching

This program (major in Science, concentration in Chemistry) is designed for prospective secondary school teachers whose principal interest is Chemistry. The following courses are prescribed by the Department of Chemistry: Chemistry 111, 112, 203, 207, 208; Chemistry electives 6 credits; Biology 101, 102; Physics 111, 112, 211, 212, 204; Mathematics 111, 112. A student presenting six credits in general chemistry may satisfy the prerequisite for an advanced course by passing a written examination set by the faculty of the Department.

010-101. GENERAL CHEMISTRY
DR. LEVESQUE
A development of the facts, theories, and methods of chemistry as applied to solids, liquids, gases and solutions. Related laboratory work is given. Chemistry 101 does not satisfy the prerequisite requirements for advanced chemistry courses. Two hours of lecture and three hours of laboratory per week. Three semester hours.
010-102. GENERAL CHEMISTRY
DR. LEVESQUE
A continuation of Chemistry 101. Prerequisite, Chemistry 101. A study of the properties and reactions of the elements. A study of descriptive inorganic and organic chemistry based on the principles of equilibrium and structure. Chemistry 102 does not satisfy the prerequisite for advanced chemistry courses. Two hours of lecture and three hours of laboratory per week. Three semester hours.

010-111. GENERAL COLLEGE CHEMISTRY
DR. STAIGER, MRS. SHAW
A study of the basic theories and laws of chemistry, concerning the common elements of the periodic system, their structures, interactions and energy relationships. This course is accompanied by work in the mathematical solution of chemical problems and is the prerequisite to advanced chemistry courses. Three hours of lecture and three hours of laboratory per week. Four semester hours.
Chemistry 111, 112 are coordinated with Mathematics 111, 112 and Physics 111, 112 in such a way as to demonstrate their relationships and interdependence.
010-112. GENERAL COLLEGE CHEMISTRY
DR. STAIGER, MRS. SHAW
A continuation of Course 010-111. Prerequisite course 010-111. A study of the oxidation states of the common elements, chemical equilibrium, solubility product and pH . The laboratory experimentation deals with the qualitative separation and characterization of the common cations and anions. Three hours of lecture and three hours of laboratory per week. Four semester hours.

010-203. QUANTITATIVE ANALYSIS
MISS BARTH
A study of commonly used methods of gravimetric and volumetric analysis. Emphasis is placed on the theory of equilibrium. Prerequisites, Chemistry, 111, 112; Mathematics 111, 112 and Physics, 111, 112, previously or concurrently. Three hours lecture and three hours of laboratory per week. Four semester hours.
010-207. ORGANIC CHEMISTRY
DR. HESS
The study of the properties, synthesis, and the structure of the most important classes of the carbon compounds. Prerequisites, Chemistry 111, 112; Mathematics 111, 112 and Physics, 111, 112, previously or concurrently. Three hours of lecture and three hours of laboratory per week. Four semester hours.
010-208. ORGANIC CHEMISTRY
DR. HESS
A continuation of Chemistry 207. Prerequisite, Chemistry 207. Three hours of lecture and three hours of laboratory per week. Four semester hours.

010-304. INORGANIC CHEMISTRY
MISS BARTH
Selected topics in the descriptive chemistry of the elements in terms of modern bonding theory. The laboratory work involves the application of special techniques to the synthesis of representative inorganic compounds. Three hours of lecture and three hours of laboratory per week. Prerequisite, Chemistry 309. Four semester hours.
010-306. INSTRUMENTAL ANALYSIS
MISS BARTH
A study of the principles and applications of modern instrumental analysis with particular emphasis on the chemical principles on which the methods of measurement are based. Prerequisites, Chemistry 203 and 309. Two hours of lecture and three hours of laboratory per week. Three semester hours.
010-309. PHYSICAL CHEMISTRY
DR. SCHULTZ
The principles of thermodynamics and quantum chemistry are used in studying the states and structure of matter. Kinetics and mechanism, equilibrium, electrochemistry, surface chemistry, solutions, and phase rule are also studied. Related laboratory work is provided. Prerequisites, Chemistry 203 and Mathematics 231. Mathematics 232 is recommended. Three hours of lecture and three hours of laboratory work per week. Four semester hours.

A continuation of Chemistry 309. Prerequisite, Chemistry 309. Three hours of lecture and three hours of laboratory work per week. Four semester hours.

## 010-311. THE IDENTIFICATION OF ORGANIC COMPOUNDS

DR. STAIGER, DR. HESS
The classification and identification of organic compounds based on physical and chemical properties; the chemical analysis of organic functional groups and the preparation of characteristic derivatives. Two hours of lecture and six hours of laboratory per week. Prerequisite, Chemistry-208. Four semester hours.

010-312. ADVANCED ORGANIC CHEMISTRY
DR. HESS
A study of the structures of organic molecules and their relation to the mechanism of organic reactions. Prerequisite, Chemistry 208 and permission of the instructor. Three hours of lecture per week. Three semester hours.

010-316. PHYSICAL CHEMISTRY FOR THE LIFE SCIENCES
DR. SCHULTZ
A study of the fundamental laws of thermodynamics as applied to biological systems. The areas emphasized are macromolecular solutions, electro-chemistry, surface chemistry and enzyme kinetics. Prerequisite, Chemistry 208, Biology 212. Three hours of lecture and three hours of laboratory per week. Four semester hours.

010-321. THE LITERATURE OF CHEMISTRY
MISS BARTH
The use of books, journals, and reports in the field of chemistry. Open to third and fourth year students. Prerequisite, Chemistry 208. One hour per week. One semester hour.

010-322. SEMINAR
STAFF
One hour per week. Prerequisite, Chemistry 208. One semester hour.
010-323. SEMINAR
STAFF
One hour per week. Prerequisite, Chemistry 208. One semester hour.
010-424. BIOCHEMISTRY
DR. KRUSE
Chemistry and intermediate metabolism of proteins, lipids, carbohydrates, and nucleic acids; energetics of biological compounds; chemistry of photosynthesis, digestion, absorption, assimilation, and excretion. Prerequisites, Chemistry 207, 208. Two hours of lecture per week, two hours of laboratory. Three semester hours.

## 010-405. ANALYTICAL CHEMISTRY

MISS BARTH
An advanced course in quantitative analysis. Topics covered are non-aqueous and complexometric titrimetry, analytical separations, and quantitative organic analysis. Prerequisites, Chemistry 203 and 310. Two hours of lecture and three hours of laboratory per week. Three semester hours.

## URSINUS COLLEGE BULIETIN

010-413. POLYMER CHEMISTRY

## DR. SCHULTZ

A study of the synthesis, structure and properties of polymers. Topics include molecular weight determination and distribution, crystallinity, solution properties, and mechanical behavior. Prerequisite, Chemistry 208. Two hours of lecture and three hours of laboratory per week. Three semester hours.

010-430. RESEARCH
STAFF
Laboratory and library work with a final report. 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 honor program. Three semester hours.

## CLASSICAL STUDIES

## ASSISTANT PROFESSOR WICKERSHAM

Courses in the Department of Classical Studies are intended to develop reading ability in ancient Greek and Latin, and to introduce the student to the major forms of ancient literary expression; they enhance general linguistic facility and give the student direct access to the original documents of Western civilization.
Majors must take at least 12 semester hours of Greek, and 12 semester hours of Latin above Latin 102. Latin 301 is required. Majors must also include among their electives History 101, 102 and elect at least 9 semester hours from the following major-related courses: English 321 (Classics in Translation), 214 (Linguistics); Anthropology 101, 102 (Introduction to Social and Physical Anthropology); History 319 (Ancient Near East \& Greece), 320 (Rome), 321 (Byzantium), 327, 238 (History of Art); Philosophy 101, 102 (History of Philosophy), 103 (General Problems of Philosophy), 105, 106 (Logic), 108 (Aesthetics); World Literature 101, 102 (Western Literature). Other courses not mentioned may be counted as major-related with the approval of the Department.
Those intending to teach Greek or Latin in the public schools are urged to acquire State certification through the Department of Education.

## 016-GREEK

016-101. 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. Three hours per week. Three semester hours.

016-102. 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. Three hours per week. Three semester hours.

016-203. ATTIC PROSE
DR. WICKERSHAM
Plato's Apology and other texts concerning Socrates. Prerequisites: Greek 102 or equivalent. Three hours per week. Three semester hours.

016-204. THE EPIC
DR. WICKERSHAM
Large excerpts from the lliad 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 203 or equivalent. Three hours per week. Three semester hours.
The following advanced courses will be given according to students' needs and interests; consult with the instructor concerning available offerings.
016-208. NEW TESTAMENT
DR. WICKERSHAM
At least one book of this important record. Three hours per week. Three semester hours.

016-301. DRAMA
DR. WICKERSHAM
Reading and study of Sophocles' Oedipus the King, plus one other tragedy by Sophocles, Aeschylus, or Euripides, or a comedy by Aristophanes or Menander. Three hours per week. Three semester hours.
016-302. HISTORICAL WRITERS
DR. WICKERSHAM
Large excerpts from Herodotus' Persian Wars, Thucydides' Peloponnesian War, or Xenophon's Greek History. Three hours per week. Three semester hours.
016-401. SEMINAR
DR. WICKERSHAM
Seminars of varying content, concentrating on a topic, author, or genre. Three hours per week. Three semester hours.

016-402. SEMINAR
DR. WICKERSHAM
Seminars of varying content, concentration on a topic, author, or genre. Three hours per week. Three semester hours.

## 017-Latin

017-101. ELEMENTARY LATIN
DR. WICKERSHAM
Instant production of reading ability, with ever-growing development of vocabulary and style. Forms unit with Latin 102. Three hours per week. Three semester hours.
017-102. ELEMENTARY LATIN
DR. WICKERSHAM
Continuation of Latin 101. All aspects of classical Latin are covered; readings depict wide variety of Roman life. Three hours per week. Three semester hours.
017-203. INTERMEDIATE LATIN
DR. WICKERSHAM
Review of elementary Latin. Carefully programmed readings cover topography of Rome, and early Roman legends and history down through the first Punic War. Three hours per week. Three semester hours.
017-204. INTERMEDIATE LATIN
DR. WICKERSHAM
Continues Latin 203. Practice and review, and transition to readings from original sources taking Roman history through the growth of the empire. Three hours per week. Three semester hours.

The sequence Latin 101-204 is recommended for fulfilling the foreign language requirement.

The following advanced courses will be offered as suits the needs and interests of students; consult with the instructor concerning available offerings.

## URSINUS COLLEGE BULLETIN

017-301. THE LATIN LANGUAGE
DR. WICKERSHAM
Detailed study of Latin vocabulary, morphology and syntax. Introduction to comparative linguistics. Survey of documents and literature from the origins to the present. Required for Classical Studies majors. Prerequisite, Latin 204, equivalent, or permission. Three hours per week. Three semester hours.

017-302. INTRODUCTION TO LATIN POETRY
DR. WICKERSHAM
Poems of Catullus, Ovid, Tibullus, Propertius. Stress on developing sensitivity and canons of appreciation. Three hours per week. Three semester hours.

017-303. HISTORICAL WRITERS
DR. WICKERSHAM
Caesar, Suetonius, or Tacitus. Three hours per week. Three semester hours.
017-304. THE ROMAN REVOLUTION
DR. WICKERSHAM
Speeches and letters of Cicero, and other contemporary documents. Three hours per week. Three semester hours.
017-305. VERGIL'S AENEID
DR. WICKERSHAM
Paganism transcended. Three hours per week. Three semester hours.
017-401. SEMINAR
DR. WICKERSHAM
Seminars of changing content, for study of special topics, authors, genres. Three hours per week. Three semester hours.
017-402. SEMINAR
DR. WICKERSHAM
Seminars of changing content, for study of special topics, authors, genres. Three hours per week. Three semester hours.

## 018-COMPUTER SCIENCE <br> ASSISTANT PROFESSOR JESSUP

018-101. INTRODUCTION TO COMPUTER SCIENCE STAFF
The aim of this course is to develop an understanding of the concepts of an algorithm and of algorithmic methods for the solution of both numerical and nonnumerical problems on the computer. The course will include such topics as error analysis, computer Logic, data structures, languages, model building and simulation. Three hours per week. Three semester hours.

## 019-DRAFTING AND DESCRIPTIVE GEOMETRY PROFESSOR MARSTELLER

## 019-201. DRAFTING

STAFF
Freehand lettering, use of instruments, geometric construction, freehand sketching, orthographic projection including auxiliary views, sectioning, axonometric projection, oblique projection, intersections, developments, fasteners, dimensioning, workıng drawings, shop processes, reproduction methods, graphs. Six hours laboratory pet week. Three semester hours.

## 019-202. DESCRIPTIVE GEOMETRY

STAFF
Principles of projection, problems involving the essential relations of points, lines and planes, surfaces of revolution, warped surfaces, intersections, developments. Prerequisite, Drafting 201. Six hours laboratory per week. Three semester hours.

## 020-ECONOMICS

## ASSOCIATE PROFESSOR PILGRIM ASSOCIATE PROFESSOR SYMONS ASSISTANT PROFESSOR MEYER

ASSISTANT PROFESSOR PETRAKIS MR. McCARTHY

The work in the Economics Department is designed to give (1) a knowledge of the structure and functioning of our economy for effective citizenship; (2) a knowledge of the philosophy and methods of economics as a policy science; (3) a suitable background in economics for those who wish to enter business, law, government, or graduate school.
Students majoring in the department must take a minimum of thirty semester hours of work in the department including Courses 101, 102, 325, 326, and at least one seminar in Economics. In addition, they must take Mathematics 101, 102, 213, 214, and one pivotal series other than Economics 101, 102 from the Social Science Division. Mathematics 101, 102 may be waived upon the basis of adequate previous preparation.

020-101. ECONOMIC PRINCIPLES
STAFF
Basic economic concepts, national income and its fluctuations, the money and banking system, and the role of government. Three hours per week. Three semester hours.

020-102. ECONOMIC PRINCIPLES
STAFF
Price theory, income distribution, international trade, and current economic problems. Prerequisite, Economics 101. Three hours per week. Three semester hours.

## 020-211. ACCOUNTING PRINCIPLES

DR. PETRAKIS
Introduction to principles and procedures underlying the periodic determination of income and financial positions; emphasis is directed toward the interrelationship between statements and their use in decision making. Three hours per week. Three semester hours.

020-212. ACCOUNTING PRINCIPLES
DR. PETRAKIS
Partnership, corporate, manufacturing cost, and departmental accounting. Analysis of financial statements and the impact of accounting methods and policies on financial reports. Prerequisite, Economics 211. Three hours per week. Three semester hours.

020-215. BUSINESS LAW
MR. MCCARTHY
Fundamental procedures governing contracts, sales, agency, bailments and negotiable instruments with emphasis on the analysis of cases. Three hours per week. Three semester hours.

## URSINUS COLLEGE BULLETIN

## 020-306. CORPORATION FINANCE

MR. SYMONS
Basic principles underlying the financing of the corporate structure. Short and longterm financing instruments. Expansion, failure, and reorganization of the corporation. Prerequisite, Economics 101. Three hours per week. Three semester hours.

020-307. MARKETING
MR. SYMONS
Basic principles and practices involved in the physical distribution of goods and services between producers and consumers. Methods used to create place, time, and possession utility. Three hours per week. Three semester hours.

020-313. PUBLIC FINANCE AND TAXATION
MR. SYMONS
Principles of public expenditures, public revenues, public indebtedness, and financial administration. Principles and workings of the Federal Income Tax Law. Class assignments in solving income tax problems. Prerequisite, Economics 101, 102. Three hours per week. Three semester hours.
020-316. MONEY AND BANKING
MR. SYMONS
Monetary theory and practice with reference to commercial banking in the United States. Governmental monetary and fiscal policies. International balance of payments. Prerequisites, Economics 101, 102. Three hours per week. Three semester hours.
020-318. ECONOMICS OF MANAGEMENT AND LABOR
MR. MEYER
Theory and practice in the organization and management of the firm for effective use of capital and labor. Three hours per week. Three semester hours.
020-321. HISTORY OF ECONOMIC THOUGHT
MR. MEYER
An examination of the development of systematic economic thought from ancient to modern times. Ideas are considered in the light of their initial and continuing relevance. Three hours per week. Three semester hours.
020-325. MICRO-ECONOMICS
DR. PILGRIM
Advanced study of price theory and income distribution. Prerequisite, Economics 101, 102. Three hours per week. Three semester hours.
020-326. MACRO-ECONOMICS
DR. PILGRIM
Development of alternative theoretical models of output, employment, and price level determination and the impact of governmental stabilization policies. Prerequisite, Economics 101, 102. Three hours per week. Three semester hours.
020-328. COMPARATIVE ECONOMIC SYSTEMS
MR. MEYER
Analysis of National economic systems in theory and practice. The development of economic policy and problems is discussed and compared. Two year cycle of topics; each topic may be elected for credit. Prerequisite, Economics 101, 102.
*020-328a. ECONOMIC SYSTEMS IN DEVELOPED COUNTRIES
Three hours per week. Three semester hours.
020-328b. ECONOMIC SYSTEMS IN UNDERDEVELOPED COUNTRIES
Three hours per week. Three semester hours.

[^2]International trade theory involving classical and neoclassical concepts. Present institutional arrangements. Foreign exchange rates, balance of payments, tariffs. Prerequisite, Economics 101, 102. Three hours per week. Three semester hours.

020-434. ECONOMIC DEVELOPMENT
MR. MEYER
Examination of the theories of economic growth, and of the social, economic and political factors that seem to affect the rate of growth. Two year cycle of topics; each topic may be elected for credit. Prerequisite, Economics 101, 102.

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*020-434a. PROCESS AND PROBLEMS OF DEVELOPMENT IN THE
    MODERN WORLD
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Three hours per week. Three semester hours.

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020-434b. PROCESS AND PROBLEMS OF ECONOMIC DEVELOPMENT
    IN EUROPE AND THE U.S.
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Three hours per week. Three semester hours.
020-435. SEMINAR IN CURRENT ECONOMICS PROBLEMS
MR. MEYER
Review of contemporary economic problems in a setting of policy actions and theoretical analysis. Preparation and discussion of research papers. Open to senior economics majors or to others with permission of instructor. Three hours per week. Three semester hours.

## 020-436. SEMINAR IN ECONOMETRICS

DR. PILGRIM
Review of empirical work by contemporary economists in a quantitative mathematical setting. Construction of economic models. Development and presentation of research papers. Prerequisites, Mathematics 101, 102, 213 and 214. Three hours per week. Three semester hours.

## 025-EDUCATION

## ASSOCIATE PROFESSOR COGGER ASSOCIATE PROFESSOR LANDES PROFESSOR FLETCHER VISITING PROFESSOR LISSFELT ASSISTANT PROFESSOR SULLIVAN VISITING PROFESSOR POGAR ASSISTANT PROFESSOR FAGO

The Department of Education aims (1) to increase the students' awareness of the function of the school in modern society; (2) to understand forces which cause change in society and to develop a philosophy of education which will be suitable to these changes; (3) to increase the students' understanding of the nature of growth and the development of individuals; (4) to acquaint the students with modern theories of learning; (5) to provide opportunities for future teachers to become acquainted with acceptable practices in the schools; (6) to develop the skills necessary for beginning teachers. The preparation of teachers is a function of the college as a whole.

[^3]The Department of Education provides the professional courses required for certification of secondary school teachers in Pennsylvania, New Jersey, Delaware and Maryland. In Pennsylvania approval for certification has been granted in nearly all the subject areas of the curriculum. Copies of these approved programs are in the hands of the department advisers and should be referred to when planning your yearly registration. Students preparing for requirements of other states should consult the Chairman of the Department for information concerning specific requirements of those states. Students preparing for teaching must complete Psychology 101 prior to taking courses in Education. As a prerequisite to student teaching, second-year students are required to observe classes in secondary schools for ten hours, and third-year students in areas other than Physical Education are required to observe classes in secondary schools for twenty hours. For Physical Education majors, at least eight hours of the third-year observation should be in elementary schools. The remainder of the twenty hours for Physical Education majors will be in secondary schools. Information regarding this observation can be obtained in the office of the Department of Education.
Those students who elect student teaching in the fall semester of the senior year have a full semester of professional courses. The following courses will be given in that semester: Education 441, 443, 405, 444.
The following program of studies is required by all students seeking certification in secondary school teaching:

Second year, 2nd semester, Education 202; Third year, Education 223, 224; Fourth year, 1st semester, Education 441; Education 443; Education 405; Education 444.
Education 443 will be satisfied for students who major in Health and Physical Education upon the successful completion of Physical Education 355 and 356.

025-202. INTRODUCTION TO SECONDARY SCHOOL TEACHING DR. COGGER, MR. LANDES, MR. LISSFELT An introductory course for those who plan to enter teaching. It deals with the organization, personnel, agencies and characteristics of the American school system, and sketches briefly the characteristics of teaching as a profession and the details of the teacher's responsibility in the classroom and in the school. Open only to sophomores and juniors, not to seniors. Three hours per week. Three semester hours.

## 025-223. EDUCATIONAL PSYCHOLOGY - LEARNING

DR. FAGO, DR. SULLIVAN
Contemporary learning theory for teachers. Topics include schedules of reinforcement, operant theory and methodology for the classroom, token economics, and programmed learning techniques and their application. (The same course as 223 under Psychology.) Prerequisite, Psychology 101. Three hours per week. Three semester hours.

025-224. EDUCATIONAL PSYCHOLOGY - GROWTH AND DEVELOPMENT DR. FLETCHER, DR. FAGO, DR. SULLIVAN
The nature and development of the psychological processes from the prenatal period through adolescence. (The same course as 224 under Psychology.) Prerequisite, Psychology 101. Three hours per week. Three seméster hours.

025-405. STUDENT TEACHING AND PRACTICUM
DR. COGGER, MR. LANDES, MR. LISSFELT, MR. POGAR A laboratory course consisting of observation and student teaching. Supervision is provided by the Department of Education in cooperation with cooperating teachers from the selected schools. Where possible, supervision will also be provided by members of the college faculty whose interests are those of the subjects which the students teach. Conferences and critiques are held between the college supervisors and student teachers. A practicum is held bi-weekly while the student teaching program is in progress, dealing with the analysis of classroom instructional practice and the responsibilities of a beginning teacher. This course is open only to fourthyear students who meet personality and academic requirements. A student who has not acquired an accumulative average of at least 70 by the end of the first term of his junior year will not normally be approved for student teaching. Fall semester. Prerequisites, Education 202, 223, 224, 441, 443. Eight semester hours.
025-409. EDUCATIONAL AND PSYCHOLOGICAL TESTS AND MEASUREMENTS
DR. FLETCHER
An introductory survey of the field of measurement in psychology and education; main features of the technique of testing and test construction; types of tests and scales; evaluation; interpretation; use. (The same course as 409 under Psychology.) Prerequisites, Psychology 101, 210. Two hours of lecture. Two hours of laboratory per week. Three semester hours.
025-434. SEMINAR IN SECONDARY EDUCATION
MR. LANDES
A study of selected topics, drawn from curriculum, which are relevant to secondary education. Two hours per week. Two semester hours.
025-441. ORIENTATION TO EDUCATIONAL PRACTICE AND METHODOLOGY MR. LANDES, DR. COGGER
Principles of secondary school teaching; general methods of instruction; problems of the beginning teacher; instruction and practice in the utilization of audiovisual methods and materials. Two hours per week. Two semester hours.

## 025-443. SPECIAL METHODS OF TEACHING IN THE SECONDARY SCHOOL

STAFF
Instruction in the techniques appropriate to the teaching of secondary school subjects; units on reading where appropriate. Sections will be formed in the following areas and noted with the designated suffixes on the college records.

| (C)-Classical Studies | (R)-Romance Languages |
| :--- | :--- |
| (E)-English | (S)-Science |
| (G)-Germanic Languages | (X)-Social Science |

(M)-Mathematics

Prerequisite, Education 441. One hour per week. One semester hour.
025-444. FOUNDATIONS OF EDUCATION
DR. COGGER, MR. POGAR A study of the philosophical and historical foundations of education and the problems of contemporary education, emphasizing the potential implications not only for the secondary school teacher, but for society in general. A requirement for those preparing to teach, it attempts to synthesize all their preliminary study and practice in their teacher education. It can be a valuable liberalizing course for those who do not prepare for teaching. Three hours per week. Three semester hours.

## ENGLISH

## PROFESSOR YOST PROFESSOR STOREY ADJUNCT PROFESSOR WILLIAMS ASSOCIATE PROFESSOR DOLMAN ASSOCIATE PROFESSOR JONES ASSOCIATE PROFESSOR BOZORTH

## ASSISTANT PROFESSOR BYERLY ASSISTANT PROFESSOR De CATUR ASSISTANT PROFESSOR HENRY ASSISTANT PROFESSOR PERRETEN ASSISTANT PROFESSOR RICHTER ASSISTANT PROFESSOR WICKERSHAM

Majors must take at least thirty semester hours in English beyond Composition 101, 102. To complete departmental requirements, in their senior year majors must pass a comprehensive examination in English and American Literature. Most students majoring in English will be strongly urged to take the following courses: History 101, 102; History 309, 310 or 311, 312; Literature 203, 204; and Literature 219, 220. Students preparing for graduate study in English should elect French and German as their modern languages. Study in classical languages is also recommended for such students as is Literature 213. Students preparing to teach should take Literature 214.
Students will be guided in selecting courses that will help prepare them for the comprehensive examination as well as for their careers.

## 031-Composition

031-101. FIRST-YEAR COMPOSITION
STAFF
Practice in the writing of exposition; readings in narrative and expository prose. Three hours per week. Three semester hours.
031-102. FIRST-YEAR COMPOSITION STAFF
Continuation of Composition 101; readings in poetry and drama. Prerequisite, Composition 101. Three hours per week. Three semester hours.
031-205. ADVANCED COMPOSITION
MR. DOLMAN
Discussion of and practice in current types of fictional writing, with emphasis on the short story. Prerequisite, Composition 101, 102. Two hours per week. Two semester hours.
031-206. ADVANCED COMPOSITION
MR. DOLMAN
Discussion of and practice in non-fictional writing with an introduction to basic forms of journalism. Prerequisite, Composition, 101, 102. Two hours per week. Two semester hours.
031-308. ADVANCED COMPOSITION
MR. DOLMAN
A conference course in creative writing offering the student opportunity to practice his favorite type of composition. Enrollment is limited to twelve qualified students by arrangement with the instructor. Prerequisite, Composition 101, 102. Individually scheduled. Two semester hours.

## 032-Literature

032-203. SURVEY OF ENGLISH LITERATURE
STAFF
The history of English Literature from its beginnings to the end of the neoclassical era. Special attention is given to the social background. Three hours per week. Three semester hours.

A continuation of course 203 to the present. Three hours per week. Three semester hours.

032-209. SHAKESPEARE
DR. DeCATUR, DR. HENRY
The reading of Shakespeare's principal plays and the study of their background. Three hours per week. Three semester hours.

032-210. SHAKESPEARE
DR. DeCATUR, DR. HENRY Continuation of Literature 209. Literature 209 is not a prerequisite for Literature 210. Three hours per week. Three semester hours.
Literature 209 and 210 are elective for second-year, third-year and fourth-year students.

032-213. HISTORY OF THE ENGLISH LANGUAGE
A survey of the development of the English language from Old English to modern American and British English. Close analysis of samples of English in at least three stages of its history. Three hours per week. Three semester hours.
032-214. LINGUISTICS AND MODERN GRAMMAR
DR. BYERLY
This course prepares future teachers to utilize a variety of current approaches to English grammar. Although transformational-generative theory is emphasized, traditional and structural grammars are also discussed. Three hours per week. Three semester hours.

032-219. AMERICAN LITERATURE
DR. YOST
A survey of American literature from its beginning to the Civil War. Three hours per week. Three semester hours.

032-220. AMERICAN LITERATURE
DR. YOST
American literature from the Civil War to the present. Prerequisite, Literature 219. Three hours per week. Three semester hours.
Literature 219 and 220 are elective for second-year, third-year and fourth-year students.
*032-305. ENGLISH LITERATURE FROM 1660 TO 1740
DR. STOREY
The literature of the Restoration and the early decades of the eighteenth century. Three hours per week. Three semester hours.
Literature 305 is elective for third-year and fourth-year students.
*032-306. ENGLISH LITERATURE FROM 1740 TO 1795
DR. PERRETEN
The literature of the neo-classical age and of pre-romanticism. Three hours per week. Three semester hours.
Literature 306 is elective for third-year and fourth-year students.
032-307. ENGLISH POETRY, 1790-1824
DR. YOST
A study of English poetry from 1790 to the death of Byron. Three hours per week. Three semester hours.
Literature 307 is elective for third-year and fourth-year students.
*This course is not offered in 1975-1976.

032-308. ENGLISH POETRY, 1824-1890
MR. JONES
A study of the poetry of Tennyson and his contemporaries. Three hours per week. Three semester hours.
Literature 308 is elective for third-year and fourth-year students.
032-315. TWENTIETH CENTURY POETRY
DR. BOZORTH
A study of modern poetry written in Britain and America. Three hours per week. Three semester hours.

## 032-321. CLASSICS IN TRANSLATION

DR. WICKERSHAM
Content varies. In 1975-76 the course will concentrate on the sources of classical mythology. Three hours per week. Three semester hours.

## *032-327. CRITICAL THEORY AND PRACTICE

DR. BYERLY
A survey of critical approaches to literature from Sir Philip Sidney's The Defense of Poesy to the present, emphasizing the practical application of critical principles in the student's own writing. Alternates with Literature 329. Three hours per week. Three semester hours.

## 032-329. CHAUCER

DR. BYERLY
A study of Chaucer's poetry in its historical context, including Troilus and Criseyde, The Canterbury Tales, and some of the short poems. Alternates with Literature 327. Three hours per week. Three semester hours.
*032-330. ENGLISH NON-DRAMATIC LITERATURE, 1485-1660
DR. DeCATUR
A study of the non-dramatic poetry and prose of the English Renaissance, with concentration upon the works of Malory, More, Sidney, Spenser, Browne, and the metaphysical poets. Prerequisite, Literature 203 or History 204. Three hours per week. Three semester hours.
Literature 330 alternates with Literature 331.
032-331. ENGLISH DRAMA, BEGINNINGS TO 1642
DR. DeCATUR
A study of the development of English drama (excluding Shakespeare) through the Medieval and Renaissance periods up to the closing of the theaters. Prerequisites, Literature 203 and Literature 209 or 210. Three hours per week. Three semester hours. Literature 331 alternates with Literature 330.
*O32-332. MILTON
DR. STOREY
The reading of Milton's poetry and most important prose works and the study of their background. Prerequisite, Literature 203 or History 204. Three hours per week. Three semester hours.

032-333. THE NOVEL IN ENGLAND AND AMERICA BEFORE THE TWENTIETH CENTURY

MR. JONES
A study of the origins and development of the novel in England and America from the seventeenth through the nineteenth centuries. Prerequisite, English Composition 101. Three hours per week. Three semester hours.

[^4]*032-334. THE NOVEL IN ENGLAND SINCE THE BEGINNING OF THE TWENTIETH CENTURY

DR. BOZORTH
A study of British fiction of the twentieth century. Three hours per week. Three semester hours.
Literature 334 alternates with Literature 434.
032-335. MODERN DRAMA
DR. HENRY
A reading and discussion course in significant European and American dramatists, movements, and genres from Buechner to Brecht, with emphasis on influences of earlier playwrights on modern writers. Prerequisite, English Composition 101. Three hours per week. Three semester hours.

032-336. CONTEMPORARY DRAMA
DR. HENRY
A reading and discussion course in significant contemporary European dramatists, movements, and genres from Pirandello through the Theatre of Revolt. Prerequisite, English Composition 101. Three hours per week. Three semester hours.

032-424. SEMINAR
DR. YOST
The reading and interpretation of English and American poetry. Prerequisite, Literature 203, 204. Three hours per week. Three semester hours.
Literature 424 is elective for fourth-year students. Enrollment is limited to twelve qualified students.
032-434. THE NOVEL IN AMERICA SINCE THE BEGINNING OF THE TWENTIETH CENTURY

DR. BOZORTH
A study of American fiction of the twentieth century. Threee hours per week. Three semester hours.
Literature 434 alternates with Literature 334.
032-440. SENIOR SEMINAR
DR. BYERLY
A study of key works and major trends in English and American literature. Open only to senior English majors. Three hours per week. Three semester hours.

032-441. SEMINAR IN ADVANCED STUDIES IN LITERATURE
STAFF
A study of genre. Prerequisite, junior or senior standing. Three hours per week. Three semester hours.
*032-442. SEMINAR IN ADVANCED STUDIES IN LITERATURE
STAFF
A study of a major author. Prerequisite, junior or senior standing. Three hours per week. Three semester hours.

## 080-FINE ARTS

MR. XARAS
080-201. APPRECIATION OF THE FINE ARTS
MR. XARAS
An integrated study of the visual, audio and performing arts. Three hours per week. Three semester hours. Enrollment limited to 60 .
*This course is not offered in 1975-1976.

080-202. APPRECIATION OF THE FINE ARTS
MR. XARAS
A continuation of Fine Arts 001. Prerequisite, Fine Arts 001. Three hours per week. Three semester hours. Enrollment limited to 60 .

080-303. PAINTING AND THE PLASTIC ARTS
MR. XARAS
Theory of painting and the plastic arts. Three hours per week. Three semester hours. Enrollment limited to 18 per section.

080-304. PAINTING AND THE PLASTIC ARTS
MR. XARAS
A continuation of Fine Arts 003. Prerequisite, Fine Arts 003. Three hours per week. Three semester hours. Enrollment limited to 18 per section.
See also History 027, 028.

## 034-GEOGRAPHY

## 034-102. GEOGRAPHY

MR. DAVIS
Extensive study of the major regions of the world. The purpose is to analyze each from the standpoint of climate, natural resources, and economic problems, and to give the student a fairly detailed knowledge of the physical geography of the regions. Three hours per week. Three semester hours.

## 033-GEOLOGY

## VISITING PROFESSOR BOGERT

The science of geology presents to the student the fundamental concepts of the earth and its relationship to the economic and cultural worlds of man.

033-101. PHYSICAL GEOLOGY
MR. BOGERT
The analysis of earth materials, structures, and processes that form the earth's surface.
Two hours of lecture and two hours of laboratory work per week. Three semester hours.

## 033-102. HISTORICAL GEOLOGY

MR. BOGERT
A systematic study of the earth's historic events as recorded by geologic processes and organic evolution. Two hours of lecture and two hours of laboratory work per week Three semester hours.

## 035-GERMAN

PROFESSOR RICE
ASSISTANT PROFESSOR CLOUSER

## MRS. CLAUSEN

The goals of the Department of German are (1) development of linguistic skills in German, (2) introduction of Germanic philology, and (3) instruction in aesthetic and critical appreciation of German Literature. Majors are required to take twenty-seven semester hours in German beyond German 203-204, and twelve hours study in another language. In the senior year, majors must pass a comprehensive departmental examination. It is recommended that students preparing for graduate study in German elect French and/or Latin as supplemental languages, and the following complementary courses from other departments: History 101, 102, 203, 204, 327 and 328; English 209, 210, 213, and 321; Philosophy 101,102.

Students majoring in German must take as many of the following courses as their schedules permit: German $305,306,407,408,409,410 ; 313,314$ and 415,416 . Twelve (12) semester hours study in another language.

035-101. ELEMENTARY GERMAN
DR. RICE
Complete coverage of grammar and practice in using the language. Three hours per week. Three semester hours.

035-102. ELEMENTARY GERMAN
DR. RICE
Continuation of German 101. Should not be taken separately. Three hours per week. Three semester hours.

## 035-203. INTERMEDIATE GERMAN

STAFF
Grammar review. Composition and conversation, together with reading of more difficult prose and poetry. Practice in laboratory. Three hours per week in class. One hour per week in the language laboratory. Three semester hours.

## 035-204. INTERMEDIATE GERMAN

STAFF
Continuation of German 203. The student is encouraged to develop facility in reading, writing and speaking German. Readings in Scientific German are included. Practice in the language laboratory is continued. Three hours per week in class. One hour per week in the language laboratory. Three semester hours.

035-305. READINGS IN GERMAN LITERATURE
STAFF
Representative literature from the Old High German Period to the Age of Enlightenment. Three hours per week. Three semester hours.

## 035-306. FAUST

STAFF
The careful study of Goethe's Faust and the development of the Faust legend. Three hours per week. Three semester hours.

035-311. SCIENTIFIC GERMAN
STAFF
Reading of texts in scientific fields. Special attention is given to techniques of translation. Prerequisite: German 204 or equivalent. Three hours per week. Three semester hours.

035-312. SCIENTIFIC GERMAN
STAFF
Continuation of German 311. Readings in scientific journals, or original scientific works. Individual consultations. Three semester hours.

035-313. WRITING AND SPEAKING GERMAN
STAFF
Practice in oral elements of the language, written composition, and advanced grammar. Three hours per week. Three semester hours.

035-314. WRITING AND SPEAKING GERMAN
STAFF
Continuation of German 313. Three hours per week. Three semester hours.

## URSINUS COLLEGE BULLETIN

## *035-407. SEMINAR IN LITERATURE OF THE EIGHTEENTH CENTURY

DR. CLOUSER
The works of Klopstock and Lessing and the music of the 18th Century are studied. Three hours per week. Three semester hours.
*035-408. SEMINAR IN LITERATURE OF THE EICHTEENTH CENTURY

DR. CLOUSER
The works of Goethe and Schiller are studied. Three hours per week. Three semester hours.
*035-409. SEMINAR IN LITERATURE OF THE NINETEENTH CENTURY

DR. CLOUSER
Authors studied include Kleist, Hebbel, Grillparzer and the music of the 19th Century. Three hours per week. Three semester hours.

## *035-410. SEMINAR IN LITERATURE OF THE TWENTIETH CENTURY <br> DR. CLOUSER

A careful reading of representative works of the Twentieth Century, including those of Gerhart Hauptmann, Kafka, Wedekind, Brecht, Dürrenmatt. Three hours per week. Three semester hours.

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035-415. THE GERMAN NOVELLE
DR. CLOUSER
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Theory and development of the Novelle from its beginning in the eighteenth century to the present. Selected works by Goethe, Kleist, Keller, Mann and Kafka. Three hours per week. Three semester hours.
*035-416. CONTEMPORARY GERMANY, LIFE AND LITERATURE
STAFF
A course designed to present a background of the social and literary life of contemporary Germany. This includes exposure to the periodical literature and newspapers. Three hours per week. Three semester hours.

## GREEK

## 040-HEALTH AND PHYSICAL EDUCATION

PROFESSOR BAILEY PROFESSOR GURZYNSKI ASSISTANT PROFESSOR WHATLEY

ASSISTANT PROFESSOR BOYD ASSISTANT PROFESSOR DAVIDSON MRS. BUTLER MR. FEIJO MRS. POLEY

The Health and Physical Education Department 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, a comprehensive Professional Program in Health and Physical Education leading to teaching certification in these areas.
Included in the Service Program are the required two-hour freshman classes in basic activities, the optional organized intramural programs for men and women, and the provision of recreational facilities tor use of all students in their leisure time.

[^5]The Professional Program is a four-year course, offering, within the framework of a broad Liberal Arts education, the opportunity to receive specific training in the field of Health and Physical Education. Implicit in its obiectives are the development of the total individual in 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.
Students majoring in Health and Physical Education must take the following courses: Physical Education 131, 132 (m) or 132 (w), 243, 244, 351, 352, 354, 355, 356, 357, 358, 361, 462, 464; 101, 102, 203, 204, 305, 306, 408; Biology 101, 102, 317, 318; Psychology 101, 108. Students preparing for teaching also must take prescribed education courses

## Required Activities Courses

MR. WHATLEY, MISS BOYD, MRS. BUTLER, MR. DAVIDSON, MR. FEIJO, MRS. POLEY
040-111, 112. These basic courses offering a variety of seasonal games and skills, aim to develop basic skills, improve physical fitness, provide enjoyment and relaxation and to develop recreational and social competence through participation in stimulating activities. These courses are required for graduation for all students except those majoring in physical education and must be completed in the first year. Two hours per week. Not for credit.

## Professional Courses Health and Physical Education

040-131. PRINCIPLES AND HISTORY OF PHYSICAL EDUCATION MR. DAVIDSON An orientation course designed to give the student an understanding of the meanıng, basic philosophies, principles, and problems of physical education; an analysis of its historical background from the era of primitive man to modern times. Three hours per week. Three semester hours.

040-132m. PERSONAL AND COMMUNITY HEALTH
(Men students only)
MR. GURZYNSKI
A study of factors affecting the physical, mental, and social well-being of the individual and of the community. Major emphasis is placed upon problems of personal health including disease prevention and the understanding of the functioning of the human body. Three hours per week. Three semester hours.

040-132w. PERSONAL AND COMMUNITY HEALTH
(Women students only)
MISS BOYD
Subject matter and presentation as for Physical Education 132 m . Three hours per week. Three semester hours.

040-242. LEADERSHIP IN CAMP AND CLUB ACTIVITIES
MR. WHATLEY
Discussion of the principles, characteristics, and processes of leadership in light of their significance to directors of camp and club activities. Three hours per week. Three semester hours.

## URSINUS COLLEGE BULLETIN

040-243. COMMUNITY RECREATION PROGRAMS
MR. BAILEY
A comprehensive analysis of the leisure-time problem. An examination of the nature, scope, need, and function of community recreation programs, and of the social and economic forces affecting them. Three hours per week. Three semester hours.

040-244. PROBLEMS AND MATERIALS OF HEALTH AND
SAFETY EDUCATION IN SCHOOL PROGRAMS
MISS BOYD
The scope, responsibilty, and function of the health education program in the school with particular stress upon the phases of healthful school living, health service, and safety education. Resource materials are studied and compiled. Two hours per week. Two semester hours.

040-351. KINESIOLOGY
MR. GURZYNSKI
An anatomical analysis of the mechanics of body movement and position. A study of the fundamental anatomical concepts in relation to the development of phyiscal education skills. Prerequisite, Biology 317, 318. Two hours per week. Two semester hours.

040-352. PHYSIOLOGY OF ACTIVITY
MR. GURZYNSKI
The physiological phenomena underlying physical activity. The anticipatory, immediate, and after effects of exercise on the different organs and the organism as a whole. Class discussion and laboratory demonstration. Prerequisite, Biology 317, 318. Two hours per week. Two semester hours

040-354. FIRST AID CARE AND PREVENTION OF ATHLETIC INIURIES
MR. DAVIDSON
This course deals with the causes, preventive procedures and emergency treatment for all types of common injuries and with those injuries specifically incident to athletic competition. Conditioning exercises, diet and various therapeutic aids are studied. Laboratory practice includes bandaging, taping, massage, and the clinical use of physical therapy equipment. This work meets the requirements for the Red Cross Standard First Aid certificate. Two hours per week. Two semester hours.

040-355. METHODS OF HEALTH INSTRUCTION
MISS BOYD
Analysis of the principles, materials, and methods involved in the teaching of health at different age levels. Lesson plans and units construction. Open only to physical education majors or students who have completed six hours in Education. Two hours per week. Two semester hours.

## 040-356. PRINCIPLES AND METHODS OF TEACHING PHYSICAL EDUCATION

MRS. BUTLER,
Principles, methods, and problems of teaching physical educational activities at the elementary and secondary school levels, lesson planning, unit and curriculum construction. Open only to physical education majors or students who have completed six hours in Education. Two hours per week. Two semester hours.

## 040-357. PRINCIPLES AND METHODS OF COACHING AND OFFICIATING MISS BOYD, MR. GURZYNSKI, AND STAFF

This course is designed with particular reference to the needs of prospective coaches and officials. Opportunities are given for practice in officiating. Two hours per week. Two semester hours.

## 040-358. PRINCIPLES AND METHODS OF COACHING AND OFFICIATING MISS BOYD, MR. WHATLEY, AND STAFF

Continuation of Physical Education 357. Two hours per week. Two semester hours.
040-361. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION MRS. BUTLER
This course aims to familiarize the student with the nature, function and history of measurement in the field of physical education and to give him working knowledge and practical experience in the use of testing procedures. Three hours per week. Three semester hours.

## 040-462. ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION <br> MR. DAVIDSON

A study of the administrative problems in health education and physical education. Two hours per week. Two semester hours.

040-464. CORRECTIVE AND ADAPTIVE PHYSICAL EDUCATION
MR. FEIJO
An analysis of conditions affecting the development of atypical children; methods for selecting and classifying such individuals, with particular attention to the adaption of activities to meet their needs. Three hours per week. Three semester hours.

040-466. HEALTH AND PHYSICAL EDUCATION SEMINAR
STAFF
Consideration of current trends and emphasis in the fields of health, physical education and recreation. Lecture, discussion, papers, reports, and guest speakers. Limited to second semester seniors in physical education curriculum. Two hours per week.
Two semester hours.

## Activities Courses

040-101, 102. FIRST YEAR ACTIVITIES
STAFF
Physical Education activities of a seasonal nature comprise the major content of this course with greatest stress laid on team sports. All activities are analyzed from the teaching standpoint. Students are given opportunities for self evaluation and for creative and teaching experiences. Six hours per week. Four semester hours.
MEN: Football, soccer, speedball, basketball, wrestling, gymnastics (apparatus and tumbling), lacrosse, baseball, square, folk and social dancing.
WOMEN: Field hockey, soccer, speedball, basketball, lacrosse, tennis, softball, gymnastics (apparatus and tumbling), square, folk and social dancing.
040-203, 204. SECOND YEAR ACTIVITIES
STAFF
A continuation of H \& PE 111 and 112 with some additional activities. More stress is placed on teaching and on the development of advanced skills and team strategies. Opportunity is given in modern dance for original composition. Six hours per week. Four semester hours.
MEN: Football, soccer, speedball, basketball, wrestling, swimming, weight training and conditioning, handball, paddleball, baseball, lacrosse, and track and field.
WOMEN: Field hockey, soccer, speedball, basketball, swimming, modern dance, badminton, squash and lacrosse.

More time is devoted to individual sports with continuing emphasis upon the teaching and analysis of skills and strategies, and upon the role of these activities in the physical education program. Six hours per week. Four semester hours.
MEN: Archery, golf, tennis, badminton, squash, bowling, swimming, volleyball, team handball, and elementary activities.
WOMEN: Archery, golf, tennis, bowling, swimming, team handball, volleyball, weight training and conditioning, and elementary activities.

040-408. FOURTH YEAR ACTIVITIES
STAFF
A continuation of courses 305 and 306 at a more advanced level. In addition, track and field for women and synchronized swimming, diving, judo and self defense for men and women. Six hours per week. Two semester hours.
Professional courses offered by the Department of Health and Physical Education are designed for students majoring in Health and Physical Education. Students in other majors may elect such courses but, except for H \& PE 132 m or 132 w , academic credit will be withheld until the student has completed the general college requirements, his departmental requirements, and has earned a total of one hundred twenty semester hours credit. An exception will be made in the case of a student who wishes to have Health or Physical Education written upon his teaching certificate in addition to another subject matter certification. In such a case, academic credit will be given within the one hundred twenty hour limit. Students should consult the Education Department to learn the exact certification requirements of a particular state.

## 045-HISTORY

PROFESSOR DAVIS<br>PROFESSOR E. H. MILLER<br>PROFESSOR PARSONS

## ASSOCIATE PROFESSOR VISSER ASSISTANT PROFESSOR COPE ASSISTANT PROFESSOR REED MR. XARAS

The objectives of the History Department are to provide an opportunity for students to understand the backgrounds of Western culture and their relationships to other cultures through a knowledge of pertinent historical material, and to become acquainted with the methods of historical research and analysis.
In addition to History 101, 102 students majoring in history must take Course 213, 214; six additional semester hours of European history; eleven semester hours in elective history courses, including one seminar; Economics 101, 102; Political Science 101, 102; Sociology 201; English Literature 203, 204 or 219, 220; and Psychology 101.
To complete departmental requirements, majors must pass in their senior year a comprehensive examination in History.
For students who plan to prepare for secondary school teaching in the social studies field it is suggested that consideration be given to course 433-434 and to those other courses which include study of contributions of minority groups, specifically History 213-214; 207-208; 300-400; and the seminars devoted to African or American topics.

## COURSES OF INSTRUCTION

## 045-101. EUROPEAN CIVILIZATION

## STAFF

An introductory history of ideas and institutions in European Civilization for the purpose of providing a general historical background for other courses and for an understanding of contemporary world affairs. Two lectures and one section meeting per week. Three semester hours.
045-102. EUROPEAN CIVILIZATION
STAFF
Prerequisite, History 101. Continuation of Course 101. Two lectures and one section meeting per week. Three semester hours.
045-203. MEDIEVAL INSTITUTIONS
DR. VISSER
A study of selected economic, social, cultural, religious, and political institutions essential to the understanding of the period from the fall of Rome to the Renaissance. Not open to first-year students. Three hours per week. Three semester hours.

045-204. THE RENAISSANCE AND THE REFORMATION
DR. VISSER
A study of humanism and religion in the 15 th and 16 th centuries. This course not open to first-year students. Three hours per week. Three semester hours.

045-205. THE AGE OF ENLIGHTENMENT
DR. COPE
The development of the European state system 1648-1815, the Enlightenment, the French Revolution and the Napoleonic Era. Not open to first-year students. Three hours per week. Three semester hours.

045-206. THE AGE OF ROMANTICISM
DR. COPE
European romanticism and nationalism 1815-1870. Not open to first-year students. Three hours per week. Three semester hours.

045-207. THE TWENTIETH CENTURY
DR. VISSER
A study of the impact of industrialization, neo-imperialism, and nationalism upon the European peoples and their overseas empires in the years leading up to and directly following the first World War. Not open to first-year students. Three hours per week. Three semester hours.

045-208. THE TWENTIETH CENTURY
DR. VISSER
A continuation of History 207 covering the events leading up to and following the second World War and the problems of contemporary world history. Not open to first-year students. Three hours per week. Three semester hours.

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045-213. THE UNITED STATES OF AMERICA DR. PARSONS, DR. REED
``` Political and cultural history from colonial status to World Power with special emphasis on Pennsylvania. This course is prescribed for all students majoring in history and for any others who are preparing to teach social studies. Three hours per week. Three semester hours.

045-214. THE UNITED STATES OF AMERICA
DR. PARSONS, DR. REED
A continuation of Course 213. Prescribed for all students majoring in history and for any others preparing to teach social studies. Three hours per week. Three semester hours.

045-309. ENGLAND AND THE BRITISH EMPIRE
DR. COPE
A history of the British people with special attention to political and constitutional developments to 1600 . Three hours per week. Three semester hours. (Alternates with 311.)

045-310. ENGLAND AND THE EMPIRE - COMMONWEALTH
DR. COPE
A continuation of History 309 with special attention to political and imperial developments since 1600. Three hours per week. Three semester hours. (Alternates with 312.)
*045-311. BRITISH SOCIAL HISTORY
DR. COPE
A study of the daily life of the British people. Three hours per week. Three semester hours. (Alternates with 309.)
*045-312. BRITISH SOCIAL HISTORY
DR. COPE
A continuation of Course 311. Three hours per week. Three semester hours. (Alternates with 310 .)

045-315. AMERICAN DIPLOMATIC HISTORY
DR. REED
A study of American diplomacy from the treaty of 1783 to the present, including an analysis of the various factors which determine that policy: public opinion, population, world markets and international organization. Three hours per week. Three semester hours.

\section*{045-317. LATIN AMERICA}

DR. MILLER
Political and cultural backgrounds of South and Central American nations and their relation to the interests and policy of the United States. Three hours per week. Three semester hours. (Alternates with 323.)

\section*{045-318. LATIN AMERICA}

DR. MILLER
A continuation of History 317. Thre hours per week. Three semester hours. (Alternates with 324.)
*045-319. ANCIENT HISTORY
DR. VISSER
Studies in the social, political, and economic life in the ancient world of the Eastern Mediterranean and the Hellenistic area. Three hours per week. Three semester hours.

\section*{*045-320. ANCIENT HISTORY}

DR. VISSER
A continuation of History 319 with emphasis upon the history of the Roman republic, the transition to empire, and the causes for the decline of the Roman world. Three hours per week. Three semester hours.
*045-321. MIDDLE EAST
MR. DAVIS
A study of the Byzantine, Persian, and Moslem empires in the middle ages. Three hours per week. Three semester hours.

\footnotetext{
*This course is not offered in 1975-1976.
}

\section*{COURSES OF INSTRUCTION}
*045-322. MIDDLE EAST
MR. DAVIS
The Moslem World and the Middle East under the Ottoman Empire and in modern times. Three hours per week. Three semester hours.

\section*{*045-323. THE FAR EAST}

DR. MILLER
History of the Asiatic Mainland and the Pacific Islands. Three hours per week. Three semester hours. (Alternates with 317.)
*045-324. THE FAR EAST
DR. MILLER
A continuation of History 323. Three hours per week. Three semester hours. (Alternates with 318.)

045-325. POLITICAL AND SOCIAL HISTORY OF RUSSIA MR. DAVIS
An examination of the political, social, economic, and cultural conditions of the medieval and modern periods of Russian development through the imperial era to the end of the nineteenth century. Three hours per week. Three semester hours.

045-326. POLITICAL AND SOCIAL HISTORY OF RUSSIA
MR. DAVIS
An examination of the history of the Soviet Union, the sources of its institutions, and its role in the contemporary world. Three hours per week. Three semester hours.

045-327. HISTORY OF ART
MR. XARAS
An introduction to the history of architecture, sculpture and painting, both Occidental and Oriental, presented by means of illustrated lectures and museum trips. Prerequisite, History 101, 102 or Philosophy 101, 102. Three hours per week. Three semester hours.

045-328. HISTORY OF ART
MR. XARAS A continuation of History 327. Prerequisite, History 327. Three hours per week. Three semester hours.

\section*{*045-335. ECONOMIC AND SOCIAL HISTORY OF THE \\ UNITED STATES AND PENNSYLVANIA - \\ COLONIAL AMERICA \\ DR. PARSONS}

Economic foundations and social change in the United States with intensive study of Pennsylvania. A two-year cycle of topics is offered: courses 335 and 336 alternate with courses 435 and 436 . This course is not open to first-year students. Three hours per week. Three semester hours.
*045-336. ECONOMIC AND SOCIAL HISTORY OF THE
UNITED STATES AND PENNSYLVANIA - CIVIL WAR DR. PARSONS
This course is not open to first-year students. Three hours per week. Three semester hours.

\footnotetext{
*This course is not offered in 1975-1976.
}

\section*{045-429. SEMINAR IN THE HISTORY OF EUROPE, OR ASIA, OR AFRICA}

STAFF
Preparation and discussion of research papers. Open to third-year and fourth-year students with the permission of the instructor. Two consecutive hours per week. Two semester hours.
The requirement of History 429 may be met by students who complete a special summer course of European travel and research conducted by a member of the Department of History of Ursinus College.

045-430. SEMINAR IN THE HISTORY OF ASIA, OR AFRICA, OR EUROPE

STAFF
Preparation and discussion of research papers. Open to third-year and fourth-year students with the permission of the instructor. Two consecutive hours per week. Two semester hours.

045-431. SEMINAR IN THE HISTORY OF AMERICA
STAFF
Preparation and discussion of research papers. Open to third-year and fourth-year students with the permission of the instructor. Two consecutive hours per week. Two semester hours.

045-432. SEMINAR IN THE HISTORY OF AMERICA.
STAFF
Preparation and discussion of research papers. Open to third-year students with the permission of the instructor. Two consecutive hours per week. Two semester hours.

045-433. MINORITIES IN AMERICA
DR. PARSONS
A study of European and Asian minority groups in American history and society with particular attention to their problems of identity and adjustment, and their special contributions to American life. Three hours per week. Three semester hours.

045-434. MINORITIES IN AMERICA
DR. REED
A study of the Afro-American minority with particular attention to their problems of identity and adjustment, and their special contributions to American life. Three hours per week. Three semester hours.

\section*{045-435. ECONOMIC AND SOCIAL HISTORY OF THE UNITED STATES AND PENNSYLVANIA WESTWARD MOVEMENT \\ DR. PARSONS}

Economic foundations and social change in the United States with intensive study of Pennsylvania. A two-year cycle of topics is offered: courses 435 and 436 alternate with courses 335 and 336. This course is not open to first-year students. Three hours per week. Three semester hours.
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045-436. ECONOMIC AND SOCIAL HISTORY OF THE
UNITED STATES AND PENNSYLVANIA -
TWENTIETH CENTURY AMERICA
DR. PARSONS

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This course is not open to first-year students. Three hours per week. Three semester hours.

\section*{050-MATHEMATICS}

\section*{PROFESSOR DENNIS \\ PROFESSOR SCHULTZ}

\section*{ASSISTANT PROFESSOR BREMILLER ASSISTANT PROFESSOR JESSUP}

The general aims of the Department of Mathematics are (1) to give the students a grasp of the ideas and methods of mathematics; (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 mathematics majors, 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.
A student majoring in Mathematics is required to take Physics 101, 102 and Mathematics 129, 130, or Physics 111, 112 and Mathematics 111, 112, 231, 233, 234 and fifteen additional hours of Mathematics selected from the courses whose numbers are above 231.

Certain particular courses are recommended but not specifically required. For those preparing to be teachers: Mathematics \(335,336,337,338,341,342\). For those preparing to take post-graduate work: Mathematics \(232,335,336,337,338,339,340,341\), 342, 443, 444, 445.

For those preparing for engineering jobs in industry and for work in the computing field: Mathematics 232, 335, 336, 339, 340, 341, 342.

050-101. FUNDAMENTALS OF MODERN MATHEMATICS
MR. BREMILLER
A treatment of the ideas that are especially appropriate to social sciences; systems of linear equations, systems of linear inequalities, linear programming, input-output analysis. Three hours per week. Three semester hours.

\section*{050-102. FUNDAMENTALS OF MODERN MATHEMATICS MR. BREMILLER}

A treatment of the differential and integral calculus and probability with emphasis on applications to the social sciences. Prerequisite, Mathematics 101. Three hours per week. Three semester hours.

\section*{050-111. ANALYTIC GEOMETRY AND CALCULUS}

\section*{MISS SCHULTZ}

An integrated study of analytic geometry and calculus with respect to functions of one variable with applications to the study of physics. This course is integrated with and therefore must be taken concurrently with Physics 111. Three hours per week. Three semester hours.

050-129. ANALYTIC GEOMETRY AND CALCULUS
DR. DENNIS
An integrated study of analytic geometry and calculus with respect to functions of one variable. Three hours per week. Three semester hours.

050-130. ANALYTIC GEOMETRY AND CALCULUS
DR. DENNIS
A continuation of Mathematics 129, with applications to the fields of chemistry and physics. Prerequisite, Mathematics 129. Three hours per week. Three semester hours.

050-213. STATISTICS
DR. JESSUP
Statistical methods of studying data from the fields of economics, education and industry; probability, measure of central tendency, dispersion, skewness. Two hours per week. Two semester hours.

050-214. STATISTICS
DR. JESSUP
Additional subjects covered are a continuation of Mathematics 213, correlation, analysis of variance, and methods of testing hypotheses. Prerequisite, Mathematics 213. Two hours per week. Two semester hours.

050-231. INTERMEDIATE CALCULUS
MR. BREMILLER
A continuation of Mathematics 130, with emphasis on functions of more than one variable including three-dimensional geometry, partial differentiation and multiple integration; study of infinite series; and applications to problems in engineering. Prerequisite, Mathematics 130 . Three hours per week. Three semester hours.

050-232. DIFFERENTIAL EQUATIONS
MR. BREMILLER
Solution of ordinary differential equations of first and second order, with applicatoons to problems in the physical sciences. Laplace transforms; Fourier Series; power series solutions. Prerequisite, Mathematics 231. Three hours per week. Three semester hours.

050-233. LINEAR ALGEBRA
DR. DENNIS
An introduction to the important mathematical concepts of systems of linear equations, matrix theory, linear transformations on vector spaces, bilinear and quadratic forms. Three hours per week. Three semester hours.

050-234. LINEAR ALCEBRA
DR. DENNIS
A continuation of Mathematics 233, with emphasis on applications to Euclidean vector spaces of two and three dimensions. Prerequisite, Mathematics 233. Three hours per week. Three semester hours.

050-335. MODERN ALGEBRA
DR. DENNIS
An introduction to the modern mathematical systems of groups, integral domains, rings, and ideals, fields, and vector spaces. Prerequisite, Mathematics 234. Three hours per week. Three semester hours.

050-336. MODERN ALGEBRA
DR. DENNIS
A continuation of Mathematics 335, with extensions to linear groups, algebraic number fields, algebra of classes, Galois theory of equations. Prerequisite, Mathematics 335 . Three hours per week. Three semester hours.

\section*{050-337. INTRODUCTION TO TOPOLOGY}

MR. BREMILLER
Elementary point set topology; metric spaces; topological spaces, separation axioms, compactness, connectedness. Three hours per week. Three semester hours. Prerequisite, consent of the Instructor.

\section*{050-338. FUNDAMENTALS OF CEOMETRY}

MR. BREMILLER
Axiomatic development, introduction to non-Euclidean geometry, projective geometry and modern geometry. Three hours per week. Three semester hours. Prerequisite, consent of the Instructor.

050-339. ADVANCED CALCULUS
MISS SCHULTZ
A theoretical treatment of the concepts of limits, continuity, partial differentiation, indeterminate forms, and infinite series; definitions and properties of the Stieltjes integral, multiple integrals, line and surface integrals. Prerequisite, Mathematics 231. Three hours per week. Three semester hours.

050-340. ADVANCED CALCULUS
MISS SCHULTZ
A continuation of Mathematics 339, with an introduction to Gamma and Bessel functions. Fourier series, Laplace transforms, and applications to the solutions of differential equations. Prerequisite, Mathematics 339. Three hours per week. Three semester hours.

050-341. PROBABILITY
DR. JESSUP
An introduction to probability theory; a study of discrete and continuous probability functions. Prerequisite, Mathematics 102 or 129. Three hours per week. Three semester hours.

050-342. MATHEMATICAL STATISTICS
DR. JESSUP
This course emphasizes the essential mathematical background of modern statistics. It includes the mathematical development of sampling distributions; the theory and application of tests of hypotheses, regression and correlation, and analysis of variance. Prerequisite, Mathematics 231 and 341. Three hours per week. Three semester hours.

\section*{*050-443. VECTOR ANALYSIS}

DR. DENNIS
Applications of vector calculus to geometry and physics; properties of scalar and vector fields, theorems on line and surface integrals, generalized coordinate systems and transformation theory. Three hours per week. Three semester hours. Prerequisite, Mathematics 339, or simultaneously with Mathematics 339.

050-444. THEORY OF NUMBERS
DR. DENNIS
Theory of primes and divisibility conditions; simple continued fractions, congruence theory, quadratic residues, diophantine equations. Three hours per week. Three semester hours.

\footnotetext{
*This course is not offered in 1975-1976.
}

\section*{URSINUS COLLEGE BULLETIN}

050-445. FUNCTIONS OF A COMPLEX VARIABLE
DR. DENNIS
An introduction to the theory of analytic functions, integrals of complex functions, conformal mapping, harmonic functions. Taylor's and Laurent's series, residue theory, geometry of elementary functions. Prerequisite, Mathematics 339, or simultaneously with Mathematics 339. Three hours per week. Three semester hours.

050-451. SEMINAR IN ADVANCED MATHEMATICS
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. Three hours per week. Three semester hours. Prerequisite, consent of the Instructor.

050-452. SEMINAR IN ADVANCED MATHEMATICS
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. Three hours per week. Three semester hours. Prerequisite, consent of the Instructor.

\section*{055-MUSIC}

MR. HOWLETT
MR. JAMES W. SOETE, Director of Bands
The program in music is designed to meet the needs of non-professional music students and to promote a wider knowledge and appreciation of the history, theory, and performance of great music. The program comprises classroom instruction and opportunities for individual and group participation.
A. APPRECIATION OF MUSIC

055-203. THE ART OF LISTENING
MR. HOWLETT
Learning to listen intelligently to great music through awareness of fundamentai musical elements, rhythm, melody and harmony, and their incorporation through form and structure into musical composition. Two hours per week. Two semester hours.

055-204. THE MUSICAL HERITAGE
MR. HOWLETT
A survey of the evolution of music in western civilization from the stone age to rock, with emphasis on enduring musical masterpieces. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours.

\section*{B. THEORY OF MUSIC}

055-301. MUSIC FUNDAMENTALS
MR. HOWLETT
A thorough foundation in the melodic, rhythmic, and harmonic elements of music; keys, scales, intervals, cadences, major and minor chords; rhythmic reading and dictation, time durations, and the study of compound and simple measures. Prerequisite, one year of piano study or of musical theory. Two hours per week. Two semester hours.
C. HISTORY OF MUSIC
*055-305. MUSIC TO 1700
MR. HOWLETT
An introductory glimpse of music in primitive, non-Western and ancient civilizations, and examination of great music from the medieval, renaissance and baroque periods. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours. (Alternates with 317.)
*055-306. MUSIC SINCE 1700
MR. HOWLETT
An examination of great music and musicians from J. S. Bach to the Twentieth Century. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours. (Alternates with 318.)

\section*{055-307. AMERICAN AND MODERN MUSIC}

MR. HOWLETT
A view of early American music with strong European folk and classical roots, and of the mainstream of twentieth century musical evolution, with increasing American domiriance through the avant-garde, electronic, folk, jazz, and rock music. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours.
*055-308a. SEMINAR: BACH AND HANDEL
MR. HOWLETT
A study of Bach and Handel. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours.
*055-308b. SEMINAR: BEETHOVEN AND WACNER
MR. HOWLETT
A study of Beethoven and Wagner. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours.

\section*{055-308c. SEMINAR: ELECTRONIC MUSIC}

MR. HOWLETT
A study of electronic music and other current compositional methods. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours.

\section*{055-317. SYMPHONIC LITERATURE}

MR. HOWLETT
The evolution of the symphony orchestra and its music. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours. (Alternates with 305.)

055-318. OPERA
MR. HOWLETT
A study of operatic masterpieces. Prerequisite: Music 203 or by permission. Two hours per week. Two semester hours. (Alternates with 306.)

\section*{D. MUSICAL ORGANIZATIONS \\ 055-121, 122. URSINUS COLLEGE BAND}

Participation in both marching and concert band. Studies in teamwork, instrumental ensemble and orchestration, and varied band literature and its interpretation. Two hours per week. Not a credit course, but a prerequisite for Music 221, 222.
*This course is not offered in 1975-1976.

\section*{URSINUS COLLEGE BULLETIN}

055-221, 222; 321, 322; 421, 422. URSINUS COLLECE BAND
Second, third, and fourth years, respectively. Continuation of first-year work. Two hours per week. Credit of one semester hour to be awarded upon completion of two full years of band participation, and of one additional semester hour to be awarded upon completion of three full years of band participation. Marching band counts as one semester, concert band as one semester.

\section*{055-123, 124. URSINUS COLLEGE CHAMBER ORCHESTRA}

Experience in string-oriented instrumental ensemble and literature. Discussion and study through rehearsal as well as performance. One to two hours per week. Not a credit course but a prerequisite for Music 323, 324.

055-223, 224; 323, 324; 423, 424. URSINUS COLLECE CHAMBER ORCHESTRA
Second, third, and fourth years, respectively. Continuation of first-year work. One to two hours per week. Credit of one semester hour to be awarded upon completion of three full years of orchestra participation.

\section*{055-125, 126. URSINUS COLLEGE CHOIR}

Experience in a large choral group, with study of great choral literature and participation in two public concerts, including the annual MESSIAH performance. Two to three hours per week. Not a credit course, but a prerequisite for Music 325, 326.

055-225, 226; 325, 326; 425, 426. URSINUS COLLEGE CHOIR
Second, third and fourth years, respectively. Continuation of first-year work. Two to three hours per week. Credit of one semester hour to be awarded upon completion of three full years of choir participation. Messiah performance counts as one semester, regular concert as one semester.

\section*{055-127, 128. MEISTERSINGERS VOCAL ENSEMBLE}

A study of the basic principles of ensemble technique, vocal characteristics, and various types of voices. Discussion and study of the musical literature of the different periods. Practical application of principles studied as well as participation with the Ursinus Meistersingers in public concerts. One to three hours per week. Not a credit course but a prerequisite for Music 227, 228.

\section*{055-227, 228; 327, 328; 427, 428. MEISTERSINCERS VOCAL ENSEMBLE}

Second, third and fourth years, respectively. Continuation of first-year work. One to three hours per week. Credit of one semester hour to be awarded upon completion of two full years of Meistersingers participation, and of one additional semester hour to be awarded upon completion of three full years of Meistersingers participation.

\section*{058-PENNSYLVANIA DUTCH STUDIES} PROFESSOR PARSONS

\section*{PROFESSOR SNYDER}

The purpose of Pennsylvania Dutch Studies is to examine the origins and values of the Pennsylvania Dutch (or Pennsylvania Germans) as an American Ethnic group, their history, customs, arts and folklore. The aim is to increase awareness of cultural facets of the Pennsylvania Dutch and to preserve dialect and folk cultural remains. Facilities of Myrin Library, Pennsylvania Folklife Society and Kutztown Folk Festival offer special opportunities for study and research.

Courses in this program arise from Ethnic Studies and follow the guidelines of the national Bicentennial project. For the present they are offered during the Summer Session only and under the condition that minimum enrollment is attained. Details may be found in the Summer School catalogue.

\section*{058-401. PENNSYLVANIA DUTCH CULTURE}

DR. PARSONS, DR. SNYDER A survey of the history, language, culture and folklore of the Pennsylvania Dutch, their influence on American life and their contributions to the American scene. Field trips among the Dutch, to Folk Festivals and museums; visiting speakers and artists. Student and faculty participation in Pennsylfawnisch Deitsch poetry, prose and music. Summer Session only. A research paper or creative composition is required. Three hours of class per day and field trips. Three semester hours

058-402. PENNSYLVANIA DUTCH CULTURE
DR. PARSONS, DR. SNYDER Continuation of Course 401, emphasizing events of the past century, the diaspora, and status of women among the Pennsylvania Dutch. Summer Session only. A research paper or creative composition is required. Three hours per day and field trips. Three semester hours.
*058-405. PENNSYLVANIA DUTCH MUSIC STAFF Folk songs of German origin and from Pennsylvania. Formal music by composers of Pennsylvania Dutch origin. Three hours per day. Three semester hours.
*058-406. PENNSYLVANIA DUTCH ART AND FOLK ART STAFF Pattern, symbolism and content in Folk Art. Formal painters of Pennsylvania Dutch origin. Three hours per day. Three semester hours.

\section*{*058-407. FOLKLORE, FOLKLIFE AND FOLK CUSTOMS OF THE PENNSYLVANIA DUTCH \\ STAFF}

Classroom study and field techniques related to the folklore, folklife, folk sayings and general folk culture of the Dutch country. Three hours per day and field trips. Three semester hours.

058-411. PENNSYLFAWNISCH DEITSCH: THE DIALECT
DR. SNYDER A study of the dialect language of the Pennsylvania Dutch. Basics of the oral language and its written variations. Three hours per day. Three semester hours.

058-412. PENNSYLFAWNISCH DEITSCH: THE DIALECT
DR. SNYDER
Continuation of Course 411. Three hours per day. Three semester hours.
*058-413. PENNSYLVANIA DUTCH PROSE AND POETRY
STAFF
Works of 19th and 20th century dialect authors, poets and playwrights. Iwwersetzing ins Deitsch. Prerequisite: Course 411, 412, or German 203, 204, or evidence of competence in the dialect. Three hours per day. Three semester hours.

Study of Pennsylfawnisch Deitsch will not fulfill the College general requirement of language for graduation.

\footnotetext{
*This course is not offered in 1975-1976
}

058-421, 422, 423, 424, 425, 426, 427, 428. SEMINARS AND WORKSHOPS DR. PARSONS, DR. SNYDER AND VISITING LECTURERS
Topics on the life, culture, customs and values of the Pennsylvania Dutch. Individual topics supervised and directed by professors and specialists. Research and folk cultural laboratory or workshop. Summer Session only. Topics for each summer to be announced by March 31 preceding. Monday through Thursday, 1:00 to \(4: 15\) p.m. One semester hour each.

058-431, 432, 433, 434, 435, 436, 437, 438. SEMINARS AND WORKSHOPS AT KUTZTOWN FOLK FESTIVAL STAFF
Topics as described in Course 421, but in areas related to Folk Festival program. Introductions from the Seminar Stage, practicum in specialized areas of the Folk Festival. Festival Week only. Monday through Thursday, 1:30 to \(4: 45\) p.m. One semester hour each.

\section*{060-PHILOSOPHY AND RELIGION}

\section*{PROFESSOR WILLIAMSON \\ ASSOCIATE PROFESSOR CREAGER}

\section*{ASSISTANT PROFESSOR HARDMAN MR. BANYACSKI}

The Department of Philosophy and Religion seeks to encourage the student's practical appreciation and facile use of the tools of philosophy, to cultivate his informed awareness and critical appraisal of philosophical perspectives, and to give him opportunity for a scholarly and appreciative study of historic as well as 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.
The offerings of the Department are open to all students, but will be of special interest to pre-theological students, prospective teachers in the fields of religion and ethics, and all of those interested in the general humanities.
Majors must take thirty-six semester hours of work within the Department including Philosophy 101, 102; Religion 201, 202; and Philosophy 401, 402 which are required. Each major also must elect fifteen hours of course work in one of four Areas of Concentration, each of which is viewed as giving explicit expression to certain traditional types of philosophical inquiry and religious reflection. The four areas are:

A-Classics, for the student interested in Ancient History, Greek, Latin, etc.
B-Poetics, for the student interested in Literature, Fine Arts, Music, etc.
C-Analytics, for the student interested in Logic, the Philosophy of Science, the Philosophy of Mathematics, etc.
D-Social Sciences, for the student interested in the Social Sciences.
With the approval of the adviser a major may make certain substitutions in the area he chooses.
060-101. HISTORY OF ANCIENT AND MEDIEVAL
PHILOSOPHY DR. WILLIAMSON, DR. HARDMAN
A survey of the evolution of reflective thought in the Western World from Thales to Descartes. Course 101 is open to all students. Three hours per week. Three semester hours.

060-102. HISTORY OF MODERN PHILOSOPHY DR. WILLIAMSON, DR. HARDMAN A survey of developing reflective thought in the Western World, beginning with Descartes and including several representative modern philosophers. Course 102 is open to all students. Three hours per week. Three semester hours.
*060-103. GENERAL PROBLEMS OF PHILOSOPHY
DR. WILLIAMSON
A study designed to orient the student with reference to perennial problems of philosophical inquiry. Intensive use is made of primary sources. (Alternates with course 109.) Three hours per week. Three semester hours.

060-104. CONTEMPORARY PHILOSOPHY
DR. WILLIAMSON
A study of late nineteenth century and twentieth century philosophers and trends in philosophic thought beginning with Nietzsche and Moore. Intensive use is made of primary sources. (Alternates with course 108.) Three hours per week. Three semester hours.

060-105. INTRODUCTORY LOGIC
MR. BANYACSKI
A study of the guiding principles involved in correct thinking: the use of terms; classification; the nature of deductive inference with special reference to fallacious forms of reasoning as they receive expression in daily life; the canons of inductive inference; the basic concepts in scientific method. Three hours per week. Three semester hours

060-106. ADVANCED LOGIC
MR. BANYACSKI
The study of symbolic logic and its relation to contemporary philosophy and scientific thought with a consideration of two-valued sentential and quantificational logic and an introduction to many-valued logics, modal logic and natural deduction. Prerequisite, Philosophy 105. Three hours per week. Three semester hours.

060-107. PHILOSOPHY OF RELIGION
DR. CREAGER, DR. WILLIAMSON
A philosophical study of religious beliefs and practices in order to ascertain the nature and value of religion. Particular attention is given to questions involving the nature and reality of God, the problem of evil and suffering, free will and immortality. Three hours per week. Three semester hours.
Offered in both terms.
*060-108. AESTHETICS
DR. WILLIAMSON
An examination of the canons of beauty and art to supply a background for evaluation of specific works of painting, sculpture, music and architecture. (Alternates with course 104.) Three hours per week. Three semester hours.

060-109. ETHICS
DR. WILLIAMSON
A study of the principles of moral judgment, with exposition and criticism of the more important theories concerning the basic distinction between right and wrong conduct; the various problems of theoretical and practical ethics. (Alternates with course 103.) Three hours per week. Three semester hours.
\({ }^{*}\) This course is not offered in 1975-1976.

\section*{URSINUS COLLEGE BULLETIN}

\section*{060-201. HISTORY AND ANTHROPOLOGY OF RELIGION: THE WESTERN SETTING}

\author{
DR. HARDMAN
}

A systematic examination of the phenomenology of religion, its personal, social, psychological and cultural manifestations in history with special attention to Judaism, Islam and Christianity. Three hours per week. Three semester hours.
060-202. HISTORY AND ANTHROPOLOGY OF RELIGION:
THE EASTERN SETTING
DR. HARDMAN
A systematic examination of the phenomenology of religion, its personal, social, psychological and cultural manifestations in history with special attention to the Oriental religions. Three hours per week. Three semester hours.

\section*{060-203. INTRODUCTION TO THE LITERATURE OF THE BIBLE: OLD TESTAMENT}

\author{
DR. HARDMAN
}

Foundations of the Judaeo-Christian tradition in the literature and thought of the Old Testament. Emphasis is placed both on the biblical materials themselves and on the varying methodologies of Old Testament interpretation. Three hours per week. Three semester hours.

\section*{060-204. INTRODUCTION TO THE LITERATURE OF THE BIBLE: NEW TESTAMENT \\ DR. HARDMAN}

A study of the Judaistic background of the New Testament, the life and times of Jesus, the emerging Church, and relevant literature. Three hours per week. Three semester hours.

060-205. RELIGION IN THE UNITED STATES
DR. HARDMAN
A study of the religious background of the colonies and a reconstruction of the influence of religion in the development of the United States. (Alternates with course 209.) Three hours per week. Three semester hours.

060-206. HISTORY OF THE CHRISTIAN CHURCH
DR. CREAGER
A study of the development of the Christian church from the apostolic period to modern times, with a view to understanding the nature and extent of its contribution to society. (Alternates with course 208.) Three hours per week. Three semester hours.
*060-208. CLASSICS OF THE LIVING RELIGIONS
DR. CREAGER
Reading and discussion of substantial portions of the classic literature of Hinduism, Buddhism, Chinese Religion, Judaism, Christianity, and Islam. The aim of the course is to gain understanding of these religions by examination of basic sources and to discover differences and similarities among them. (Alternates with course 206.) Three hours per week. Three semester hours.
*060-209. 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, etc. (Alternates with course 205.) Three hours per week. Three semester hours.

\footnotetext{
*This course is not offered in 1975-1976.
}

060-301. EPISTEMOLOGY
MR. BANYACSKI
A critical study of the theories of truth, belief, perception, understanding, and the important concepts involved in the characterization, analysis, and appraisals of classic and contemporary discussions of human knowledge. Three hours per week. Three semester hours.

060-302. PHILOSOPHY OF SCIENCE
MR. BANYACSKI
An examination of the nature of scientific method and scientific theory, with reference to presuppositions, inference, explanation, prediction, application and verification. Three hours per week. Three semester hours.

060-311. SEMINAR IN RELIGION
DR. WILLIAMSON
The directed study of a given topic in religion as it relates to the vital issues of our time. Prerequisite, Departmental permission. Three hours per week. Three semester hours.
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*060-311A (Topic for 1974-1975)
060-311B Philosophy and Theology

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060-312. SEMINAR IN RELIGION
DR. HARDMAN
The directed study of a given topic in religion as it relates to the vital issues of our time. Prerequisite, Departmental permission. Three hours per week. Three semester hours.
\(* 060-312 A\) (Topic for 1974-1975)
060-312B Luther and Calvin

060-401. SENIOR SEMINAR: CURRENT ISSUES AND MOVEMENTS IN RELIGION

DR. WILLIAMSON
AND STAFF
A study of contemporary theological and institutional trends in Religion, making use of lectures, discussions, research papers, etc. Course 401 is open only to majors in the field of Philosophy and Religion. Three hours per week. Three semester hours.

060-402. SENIOR SEMINAR: CURRENT ISSUES AND MOVEMENTS IN PHILOSOPHY

DR. WILLIAMSON
AND STAFF
A study of contemporary thinkers and schools of thought in Philosophy, making use of lectures, discussions, research papers, etc. Course 402 is open only to majors in, the field of Philosophy and Religion. Three hours per week. Three semester hours.

\section*{065-PHYSICS}

\section*{PROFESSOR SNYDER ASSOCIATE PROFESSOR MARSTELLER} ASSISTANT PROFESSOR TAKATS ASSISTANT PROFESSOR MANWEILER

The courses in Physics are designed to give the student an understanding of the logic and structure of Physics. Stress is laid upon methods of analysis and presentation of ideas. It is hoped in this way to make the student conversant with the methods of Physics, to develop in him the ability to study independently and to transmit his ideas to others.

\section*{URSINUS COLLEGE BULLETIN}

Students majoring in Physics must take the following courses: Chemistry III, 112; Mathematics 111, 112, 231, 232, 339, 340; Physics 111, 112, 203, 204, 207, 208, 207a, 208a; either Mathematics 443, 445 or Physics 315, 316 and at least six additional semester hours of credit in Physics.

Students majoring in Physics who are preparing to teach in secondary schools must take Chemistry 111, 112; Mathematics 111, 112, 231, 232; Physics 111, 112, 203, 204, 207, 208, 211, 212.

065-101. GENERAL PHYSICS
MR. MARSTELLER
Elementary mechanics and heat. Physics is presented not only as a science having practical application to everyday life, but as an example of general scientific method. Prerequisite: Mathematics 101, 102, or high school trigonometry. Three hours lecture and three hours laboratory per week. Four semester hours.

065-102. GENERAL PHYSICS
MR. MARSTELLER
Elementary wave motion, sound, electricity, magnetism, and light. A continuation of Physics 101. Three hours of lecture and three hours laboratory per week. Four semester hours.

Students intending to elect any of the advanced courses are asked to confer with the instructor during the year prior to that in which the course is to be taken, in order that a satisfactory schedule may be arranged.

065-111. GENERAL PHYSICS
DR. SNYDER AND STAFF
A study of elementary mechanics and thermodynamics utilizing the principles of calculus in the presentation and in exercises. The presentation of Physics 111 and 112 is integrated with Mathematics 111 and 112 and therefore the two courses must be taken concurrently. Three hours of lecture and three hours laboratory per week. Four semester hours.

065-112. GENERAL PHYSICS
DR. SNYDER AND STAFF
A continuation of 065-111. A study of waves, sound, electricity, magnetism, and light. Three hours lecture and three hours laboratory per week. Four semester hours.

\section*{065-203. MECHANICS I}

DR. SNYDER
Vectors, statics, vector calculus, kinematics of a particle, dynamics of a particle, energy, harmonic motion, moving reference systems, central forces, special re'ativity.
Prerequisites: Physics 111, 112, Mathematics 111, 112. Three hours lecture and three hours laboratory per week. Four semester hours.

065-204. ELECTRICITY AND MAGNETISM
DR. TAKATS
Gauss's Theorem; potential; capacity; electric and magnetic circuit; Kirchhoff's Laws; inductance; alternating currents; electrical machinery; elements of electronics. Prerequisites, Physics 111, 112, Mathematics 111, 112. Three hours lecture and three hours laboratory per week. Four semester hours.
*065-205. OPTICS
MR. MARSTELLER
Image formation, systems of lenses and mirrors; dispersion; spectra; interference and diffraction; polarization; origin of radiation; effects of radiation; applications. Three hours lecture and three hours laboratory per week. Four semester hours.

065-207. MODERN PHYSICS
DR. TAKATS
Special relativity; the elementary charged particles; electromagnetic radiation; waves and particles; elementary theory of the hydrogen atom, atomic spectra and electron distribution. Prerequisites, Mathematics 111, 112, Physics 111, 112. Three hours per week. Three semester hours.

065-207a. LABORATORY IN MODERN PHYSICS
DR. SNYDER
Laboratory work (optional) for Course 207. Three hours per week. One semester hour.

065-208. MODERN PHYSICS
DR. TAKATS
A continuation of Course 207, with applications to properties of matter, nuclear physics, and elementary particle physics. Prerequisite, Physics 207. Three hours per week. Three semester hours.

065-208a. LABORATORY IN MODERN PHYSICS
DR. SNYDER
Laboratory work (optional) for Course 208. Three hours per week. One semester hour.
065-211. GENERAL ASTRONOMY
MR. MARSTELLER
The Earth as an astronomical body; description and determination of celestial coordinates and time; optical principles and forms of the telescope and spectroscope; fundamentals of spectroscopy; the Moon and its motions; eclipses, the constellations. Prerequisites, Mathematics 101 and 102 or their equivalent and some knowledge of Physics. Three semester hours.

065-212. GENERAL ASTRONOMY
MR. MARSTELLER
Continuation of Course 211. Description and dynamics of the Solar System: Kepler's laws, Newton's laws, historical notes. The sidereal universe: stellar designations and catalogs, notes on the literature of Astronomy, the Sun as a star, stellar motions, the constitution and evolution of the stars; the Galaxy. Prerequisite, Physics 211. Three semester hours.

D65-310. MECHANICS II
DR. SNYDER
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 203, Mathematics 231, 232. Three hours per week. Three semester hours.

\footnotetext{
*This course is not offered in 1975-1976.
}

\section*{URSINUS COLLEGE BULLETIN}

\section*{065-312. INTRODUCTORY ASTROPHYSICS}

MR. MARSTELLER
Discussion of fundamental problems of Astrophysics, e.g., stellar vital statistics and their determination, stellar constitution, evolution, and the stellar model, energy generation and transfer in the stars, stellar aggregations and their dynamics, intrinsic stellar variability. The course is open to third and fourth year Physics majors and to other students who have completed Physics 065-212. Three hours per week. Three semester hours.

065-314. ALTERNATING CURRENTS
DR. SNYDER
Capacitative and self-inductive circuits; mutual induction; the alternating-current circuit; alternating-current power and power factor; divided circuits; application of complex numbers; electromagnetic waves. Prerequisites, Physics 204 and Mathematics 231. Three hours per week. Three semester hours.

065-315. ELEMENTS OF MATHEMATICAL PHYSICS
DR. SNYDER
Introduction to selected concepts and techniques of theoretical physics. Complex numbers, matrices, eigenvalues, vector algebra, vector calculus, Fourier series, calculus of variations, gamma, beta and error functions. Prerequisites: Mathematics 231, 232; Physics 111, 112. Three hours per week. Three semester hours.

065-316. ELEMENTS OF MATHEMATICAL PHYSICS
DR. SNYDER
Continuation of Physics 315. Coordinate transformations tensors, series solutions of differential equations, Legendre polynomials, Bessel functions, orthogonal functions, integral transforms, partial differential equations. Prerequisite: Physics 315. Three hours per week. Three semester hours.

065-317. SEMINAR STAFF
Study and discussion of advanced topics or recent developments in physics. Registration for this course must be in consultation with the chairman of the department. Two semester hours.

065-318. SEMINAR STAFF
Continuation of Course 317. Two semester hours

\section*{065-401. INTRODUCTORY QUANTUM MECHANICS}

DR. TAKATS
Eigenvalues and eigenfunctions; probability density, expectation values, and operators; the Schrodinger equation in one and three dimensions; the hydrogen atom; perturbation theory: identical particles, spin. The course is open to fourth-year chemistry, mathematics, and physics majors and to qualified third-year students having the consent of the instructor. Three hours per week. Three semester hours.
*065-404. THERMODYNAMICS
DR. SNYDER
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. Prerequisites: Physics 111, 112, Mathematics 231, 232. Three hours per week. Three semester hours.
*This course is not offered in 1975-1976.

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 his adviser. One semester hour.

065-412. RESEARCH
STAFF
Continuation of Course \(065-411\). One semester hour.

065-421. RESEARCH
STAFF
Same as Course 065-411, but more extensive in scope. Two semester hours.

065-422. RESEARCH
STAFF
Continuation of Course 065-421. Two semester hours.

\section*{070-POLITICAL SCIENCE}
PROFESSOR E. H. MILLER
ASSOCIATE PROFESSOR CRAFT
PROFESSOR PANCOAST
MR. KANE

ASSOCIATE PROFESSOR ZUCKER
The objectives of the Department of Political Science with relation to the general student are:
(1) To help the student attain an appreciation of both the theory and the functioning of politics.
(2) To aid the student in developing the faculty of critical thinking.
(3) To familiarize the student with those values that sustain freedom.

The professional objectives are:
(1) To prepare students for graduate work in political science and the law.
(2) To prepare students for the examinations of the domestic civil service and the foreign service.
In addition to Political Science 101, 102, students majoring in Political Science must take courses 205, 206, and 215, 216; seven semester hours in elective Political Science courses; History 101, 102; History 213, 214; Economics 101, 102; Psychology 101 and Sociology 101, 102.
Students whose mathematical aptitude in College Board scores is below 550 are required to take a mathematics refresher course in their freshman year; Mathematics 101, 102 may be taken to satisfy this requirement.

\section*{070-101. AMERICAN GOVERNMENT}

MR. KANE, DR. ZUCKER
An analysis of the structure and functions of American national and state governments. Three hours per week. Three semester hours.

\section*{URSINUS COLLEGE BULLETIN}

070-102. AMERICAN GOVERNMENT
MR. KANE, DR. ZUCKER
Continuation of Course 101. Three hours per week. Three semester hours.

\section*{070-203. MUNICIPAL GOVERNMENT AND ADMINISTRATION DR. PANCOAST}

The legal power and position of the city and other local governmental institutions in our political system. Thorough consideration of forms and activities of local government. Three hours per week. Three semester hours.

070-204. POLITICAL PARTIES
DR. PANCOAST
Both structural description and functional analysis of American political parties. The organization, work, leaders, and place of political parties in our democracy are considered at length. Three hours per week. Three semester hours.

070-205. COMPARATIVE GOVERNMENT
DR. MILLER
A detailed comparison of the Cabinet and Presidential systems, as exemplified by England and the United States. Three hours per week. Three semester hours.

070-206. COMPARATIVE GOVERNMENT
DR. MILLER
The study is extended to other representative governments, including France, Germany, and the Soviet Union. Three hours per week. Three semester hours.

070-207. POLITICAL THEORY
DR. ZUCKER
Significant political ideals, forces and concepts from Plato to the present. Three hours per week. Three semester hours.

070-208. CONSTITUTIONAL LAW
DR. PANCOAST
General principles of constitutional law as enunciated through the judicial process. Extensive use of cases on the federal system, the distribution of governmental power and the limitations on governmental power in the areas of personal liberty and property rights. Three hours per week. Three semester hours.

070-209. PUBLIC ADMINISTRATION
DR. PANCOAST
A survey of the field of public administration, emphasizing adminjstrative organization, fiscal management and personnel management. The administrative process is considered as a unit encompassing federal, state and local administration. Three hours per week. Three semester hours.

070-210. AMERICAN POLITICAL THEORY
DR. ZUCKER
Main currents in American political thought from the seventeenth century to the present. Three hours per week. Three semester hours.

070-215. METHODS OF POLITICAL ANALYSIS
DR. CRAFT
An examination of the analytic processes in the development of concepts, hypotheses, and theories. Formulation of research problems related to basic methodologies. Three hours per week. Three semester hours.

070-216. METHODS OF POLITICAL ANALYSIS
DR. CRAFT
A continuation of Course 215. Prerequisite, Political Science 215. Three hours per week. Three semester hours.

070-311. INTERNATIONAL RELATIONS
DR. CRAFT
Basic theory, principles and functioning of the states in the world community. Three hours per week. Three semester hours.

070-312. INTERNATIONAL RELATIONS
DR. CRAFT
Continuation of Political Science 070 - 311. Three hours per week. Prerequisite, 311. Three semester hours.
*070-313. SEMINAR IN INTERNATIONAL LAW
DR. MILLER
A course in the Law of Nations. Case studies are stressed. Two hours per week. Two semester hours.
*070-314. SEMINAR IN INTERNATIONAL ORGANIZATIONS
DR. MILLER
The structure and functions of international organizations. Two hours per week. Two semester hours.

070-317. SEMINAR IN AMERICAN GOVERNMENT
DR. ZUCKER
Selected topics in American Government. Preparation and discussion of research papers. Open to third and fourth year students with permission of the instructor Two hours per week. Two semester hours.

070-318. SEMINAR IN AMERICAN GOVERNMENT
DR. ZUCKER
Selected topics in American Government. Preparation and discussion of research papers. Open to third and fourth year students with permission of the instructor. Two hours per week. Two semester hours.

070-319. SEMINAR IN POLITICS OF THE DEVELOPING WORLD
DR. MILLER
Selected topics concerning the politics of Asia, the Middle East, Africa and Latin America. Preparation and discussion of research papers. Open to third- and fourthyear students with permission of the instructor. Two hours per week. Two semester hours.

070-320. SEMINAR IN POLITICS OF THE DEVELOPING WORLD
DR. MILLER Se'ected topics concerning the politics of Asia, the Middle East, Africa and Latin America. Preparation and discussion of research papers. Open to third- and fourthyear students with permission of the instructor. Two hours per week. Two semester hours.

\section*{075-PSYCHOLOGY}

\section*{PROFESSOR FLETCHER ASSISTANT PROFESSOR FAGO \\ ASSISTANT PROFESSOR LODGE ASSISTANT PROFESSOR SULLIVAN}

Students majoring in Psychology must take the following courses: Biology 101, 102, 321, 322; Mathematics 213, 214; Anthropology 101, 102; Sociology 101, 102; Psychology \(101,108,210,331\) or \(333,334,335\) or \(336,409,440,444\), and an additional elective course in Psychology.

\footnotetext{
* This course is not offered in 1975-1976.
}

\section*{URSINUS COLLEGE BULLETIN}

For those preparing to teach Psychology by earning a Social Science Certification with an emphasis in Psychology, the above courses in Biology, Mathematics, Anthropology and Sociology and the following Psychology courses are required: Psychology 101, 108, 210, 223 or 333,224 or 334,335 or 336,444 , and two of the following: Psychology 311, 312, 336 and 440. Psychology 311 is strongly recommended. For General Education and Professional Education requirements consult the Psychology Department and the Education Department.

Students who plan to continue the study of Psychology at the graduate level are strongly urged to include in their schedules Mathematics 129, 130; Biology 317, 318; Philosophy 203, 204 and Physics, 101, 102, and Psychology 311.

For those seeking admission to medical school, the following additional subjects are usually required: a year of General Chemistry, a year of Organic Chemistry, a year of General Physics, and at least two courses in Biology beyond the year of General Biology required of all Psychology majors.

075-101. INTRODUCTORY PSYCHOLOGY
STAFF
A survey of the various fields of psychology with an emphasis on the scientific search for principles of behavior. Three hours per week. Psychology 101 is a prerequisite for all other psychology courses. Three semester hours.
Psychology 101 must be taken by the first semester of the second year by all students preparing to become teachers.

\section*{075-108. MENTAL HEALTH AND ABNORMAL PSYCHOLOGY}

DR. FLETCHER, DR. SULLIVAN
The problem of mental health is treated under the following topics: The dynamics of human behavior, normal and abnormal reactions to frustration and conflict. Psychological, organic and social causes of poor mental health. The roles played by the home, the school and society in mental health. Additional topics include psycho-neuroses and functional psychoses, epilepsy, drug addiction and alcoholism. Methods of prevention and treatment of mental illness are discussed. This course is given from the point of view of preventive mental hygiene. Prerequisite, Psychology 101. Three hours per week. Three semester hours.

\section*{075-210. ELEMENTARY EXPERIMENTAL PSYCHOLOGY \\ DR. FAGO}

This course is designed to acquaint the student with laboratory techniques used in psychology. Lectures, demonstrations, individual experiments, and the preparation of scientific reports. Prerequisites, Psychology 101, Biology 101, 211, Mathematics 213, 214. Three hours lecture, two hours laboratory per week. Four semester hours.

\section*{075-223. EDUCATIONAL PSYCHOLOGY - LEARNING \\ DR FAGO, DR. LODGE}

Contemporary learning theory for teachers. Topics include schedules of reinforcement, operant theory and methodology for the classroom, token economies, and programmed learning techniques and their application. (The same course as 223 under Education.) Prerequisite, Psychology 101. Three hours per week. Three semester hours.

\section*{COURSES OF INSTRUCTION}

075-224. EDUCATIONAL PSYCHOLOGY - GROWTH AND DEVELOPMENT DR. FLETCHER, DR. FAGO, DR. SULLIVAN
The nature and development of the psychological processes from the prenatal period through adolescence. (The same course as 224 under Education.) Prerequisite, Psychology 101. Three hours per week. Three semester hours.

075-311. HISTORY AND THEORIES OF PSYCHOLOGY
STAFF
A study of the more important findings and theories contributing to the development of modern scientific psychology. Prerequisite, Psychology 101. Three hours per week. Three semester hours.

075-312. PSYCHOLOGY IN INDUSTRY
DR. FLETCHER
Applications of psychology to industry: employee and job ratings, aptitudes and skills, work methods, training programs, fatigue, safety, attitudes, morale, interviewing and counseling. Human relations problems are emphasized using the case method and role playing. Prerequisites, Psychology 101, Mathematics 213, 214. Three hours per week. Three semester hours.
*075-331. HUMAN LEARNING
DR. FAGO
Traditional research on verbal learning will be reviewed, as well as contemporary research on topics including attention, memory, cognition, and psycholinguistics. (Alternates with course 333). Prerequisites, Psychology 101 and 210. Three hours per week, two hours laboratory per week. Four semester hours.

\section*{075-333. 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 101 and 210. Three hours lecture, two hours laboratory per week. Four semester hours.

075-334. DEVELOPMENTAL PSYCHOLOGY STAFF
The concepts, theories and experimental approaches used to account for the ontogeny of behavior will be reviewed. The primary emphasis will be on human development. Prerequisites, Psychology 101 and 210. Three hours per week. Three semester hours.

075-335. PHYSIOLOGICAL PSYCHOLOGY
DR. LODGE
The physiological basis of behavior is explored. Topics include the structure of the central and peripheral nervous systems, including the sensory systems, and the physiological basis for sleep, arousal, hunger, thirst, emotion, conditioning and other related functions. Prerequisites: Psychology 101, 210; Biology 101, 211; or by permission of the instructor. Three hours per week. Three semester hours.

\footnotetext{
*This course is not offered in 1975-1976.
}

075-336. SENSATION AND PERCEPTION
DR. LODGE
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 experimental viewpoints. Prerequisites, Psychology 101, Psychology 210. Three hours of lecture, two hours of laboratory per week. Four semester hours.

\section*{075-409. EDUCATIONAL AND PSYCHOLOCICAL TESTS AND MEASUREMENTS} DR. FLETCHER
An introductory survey of the field of measurement in psychology and education; main features of the techniques of testing and test construction; types of tests and scales; evaluation; interpretation; use. Prerequisites, Psychology 101, 210. Two hours of lecture, two hours of laboratory per week. Three semester hours. (The same course as 409 under Education.)
*075-437. PERSONALITY
DR. SULLIVAN
A comprehensive survey of psychological theory and research dealing with the "normal" aspects of human nature. In addition to traditional "personality" perspectives, consideration is given to more recent alternatives, such as the behavioristic, factor-analytic, and "functional style" perspectives. (Alternates with course 439.) Prerequisites, Psychology 101, 108, 210, and 334. Three hours per week. Three semester hours.

075-439. PSYCHOPATHOLOGY AND PSYCHOTHERAPY DR. SULLIVAN Clinical and experimental approaches to the understanding and treatment of psychosis, neurosis, and related conditions. Selected findings are studied intensively to illustrate the wide variety of contemporary viewpoints and techniques. Prerequisites, Psychology 101, 108, 210, and 334. Three hours per week. Three semester hours.
075-440. SOCIAL PSYCHOLOGY

\section*{DR. FLETCHER}

A study of group action and of the group influences by which the individual is surrounded; tradition, custom, public opinion and other psychological and socia! forces which affect individual judgment and action. Prerequisite, Psychology 101, 223 or 333 . Three hours per week. Three semester hours.
075-442. RESEARCH
STAFF
Investigations of an experimental or theoretical nature pursued independently by the student. The preparation of a 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 adviser. 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 honor program. Three semester hours.
075-444. SEMINAR IN PSYCHOLOGY
STAFF
A seminar intended to familiarize the student with current trends and special topics in theoretical and applied psychology. Emphasis will be given to the preparation and presentation of papers on selected topics which will vary from year to year. Open to third and fourth year students majoring in psychology. Two hours per week. Two semester hours.

\footnotetext{
*This course is not offered in 1975-1976.
}

\section*{COURSES OF INSTRUCTION}

\section*{ROMANCE LANGUAGES}
\[
\begin{aligned}
& \text { ASSOCIATE PROFESSOR REINER } \\
& \text { ASSISTANT PROFESSOR PAUL } \\
& \text { ASSISTANT PROFESSOR SPRINGER }
\end{aligned}
\]
MRS, LUCAS
MR. RAPPOCCIO
MR. ESPADAS

The development of linguistic ability and an understanding of the foreign culture and literature comprise the scope of the first two years' work.
Students who advance beyond courses numbered 204 receive further instruction in conversation, composition and the literatures of the respective languages.
The goal of this teaching is to develop faculties of critical and esthetic judgment, as well as to perfect the use of the languages.

\section*{086-French}

French majors must meet the following requirements:
French 205, 206, 315, 316; English Literature 203, 204; History 203, 204 or 205, 206.
It is recommended that Latin 101, 102, 203, 204 (or equivalent, i.e., four years of Latin in secondary school) be taken.
Two of the following courses: French 311, 312, 313, 314.
Two of the following courses: French 421, 422, 423, 424.
To complete departmental requirements in their senior year, majors must pass a comprehensive examination in French.

086-101. ELEMENTARY FRENCH
DR. SPRINGER
Three hours per week plus one hour of language laboratory per week. Three semester hours.

086-102. ELEMENTARY FRENCH
DR. SPRINGER
Prerequisite: French 101. Three hours per week plus one hour of language laboratory per week. Three semester hours.
086-203. INTERMEDIATE FRENCH
STAFF
Prerequisite: French 102 or equivalent (i.e., satisfactory completion of two years of French in secondary school). Three hours per week plus one hour of language laboratory per week. Three semester hours.

086-204. INTERMEDIATE FRENCH
STAFF
Prerequisite: French 203. Three hours per week plus one hour of language laboratory per week. Three semester hours.

086-205. FRENCH LITERATURE IN WORLD CIVILIZATION DR. REINER
Major French writers and their contribution to world culture and civilization from the Middle Ages to the Revolution. Three hours per week. Three semester hours.

086-206. FRENCH LITERATURE IN WORLD CIVILIZATION
MRS. LUCAS
A continuation of French 205; from 1789 to the present. Three hours per week. Three semester hours.

086-311. NINETEENTH CENTURY FRENCH NOVEL
MRS. LUCAS
The development of the French novel of the nineteenth century, with special emphasis on Benjamin Constant, Stendhal, Balzac, Flaubert, and Zola. Prerequisite: French 205, 206 or equivalent. Three hours per week. Three semester hours.

\section*{086-312. FRENCH POETRY OF THE NINETEENTH AND TWENTIETH CENTURIES}

Analysis and interpretation of poems of the Romantics, Baudelaire, Mallarmé, Rimbaud, Verlaine, Valéry, Péguy, and the moderns. Prerequisite: French 205, 206 or equivalent. Three hours per week. Three semester hours.
*086-313. REPRESENTATIVE TWENTIETH CENTURY WRITERS DR. SPRINGER
Studies in major novelists and dramatists from Proust and Gide to Camus and Sartre. Prerequisite: French 205, 206 or equivalent. Three hours per week. Three semester hours.
*086-314. FRANCE TODAY
MRS. LUCAS
Contemporary France as seen in its current literature, art, philosophy, and politics.
Prerequisite: French 205, 206 or equivalent. Three hours per week. Three semester hours.
French 311 and 312 alternate with French 313 and 314.
086-315. ADVANCED CONVERSATION AND COMPOSITION
Three hours per week. Three semester hours. DR. SPRINGER, MRS. LUCAS
086-316. ADVANCED CONVERSATION AND COMPOSITION
Three hours per week. Three semester hours.
DR., SPRINGER, MRS. LUCAS
086-421. MEDIEVAL FRENCH LITERATURE
DR. SPRINGER
Three hours per week. Three semester hours.
086-422. RABELAIS, THE PLEIADE, MONTAIGNE
DR. REINER
Three hours per week. Three semester hours.

\section*{*086-423. THE AGE OF LOUIS XIV}

MRS. LUCAS
Studies in depth of the major writers of the Grand Siecle. Three hours per week. Three semester hours.
*086-424. THE ENLIGHTENMENT
DR. REINER
A seminar on the decline of the monarchy and the rise of the republican ideal as seen in the works of Bayle, Montesquieu, Voltaire, Diderot and Rousseau. Three hours per week. Three semester hours.
French 421 and 422 alternate with French 423 and 424.
086-428. ADVANCED GRAMMAR
DR. REINER
Intended primarily for French majors who plan to teach. Prerequisite: French 315 or 316. Three hours per week. Three semester hours.

\footnotetext{
* This course is not offered in 1975-1976.
}

\section*{COURSES OF INSTRUCTION}

\section*{086-452. ADVANCED SEMINAR IN FRENCH LITERATURE}

STAFF
Students will select a major author, literary movement, or genre and investigate the subject in depth over an entire term. Under the close supervision of the instructor, regular conferences and reports will culminate in an original paper based on the student's research. Prerequisite: one course in advanced French literature. Three hours per week. Three semester hours.

\section*{088-Spanish}

Spanish majors must meet the following requirements:
Six hours of advanced Spanish composition and conversation and fifteen hours of Spanish literature (Students planning to teach shall take three hours of advanced grammar in second semester of the senior year and may then take twelve hours of literature); English Literature 203, 204; History 101, 102; 205, 206 or 317, 318 or 327, 328; Latin 101, 102 and 203, 204 are recommended. To complete departmental requirements in their senior year, majors must pass a comprehensive examination in Spanish.
088-101. ELEMENTARY SPANISH
MR. PAUL, MR. RAPPOCCIO
Three hours plus one hour of language laboratory per week. Three semester hours. 088-102. ELEMENTARY SPANISH

MR. PAUL, MR. RAPPOCCIO
Prerequisite, Spanish 101. Three hours plus one hour of language laboratory per week. Three semester hours.
088-203. INTERMEDIATE SPANISH
STAFF
Prerequisite, Spanish 102 or equivalent (i.e., satisfactory completion of two years of Spanish in secondary school). Three hours plus one hour of language laboratory per week. Three semester hours.
088-204. INTERMEDIATE SPANISH
STAFF
Prerequisite, Spanish 203. Three hours plus one hour of language laboratory per week. Three semester hours.

088-205. SPANISH LITERATURE IN WORLD CIVILIZATION
STAFF
Spanish master works and their contribution to world culture and civilization. Three hours per week. Three semester hours.
088-206. SPANISH LITERATURE IN WORLD CIVILIZATION
STAFF
A continuation of Spanish 205 from Romanticism to major writers in contemporary Spain and Latin America. Three hours per week. Three semester hours.
*088-310. SPANISH-AMERICAN LITERATURE
MR. RAPPOCCIO
Prerequisite, Spanish 205, 206 or 314 or permission of the instructor. Three hours per week. Three semester hours.
Spanish 310 alternates with Spanish 422.
088-313. ADVANCED COMPOSITION AND CONVERSATION
MR. PAUL, MR. ESPADAS
Three hours per week. Three semester hours.
*This course is not offered in 1975-1976.

\section*{088-314. ADVANCED COMPOSITION AND CONVERSATION}

MR. PAUL, MR. ESPADAS
Three hours per week. Three semester hours.
088-332. LATIN AMERICAN STUDIES MR. PAUL
See under World Literature.
088-421. SPANISH THEATRE SINCE 1800
MR. RAPPOCCIO
Prerequisite, Spanish 205, 206 or 314 or permission of the instructor. Three hours per week. Three semester hours.
088-422. SPANISH PROSE SINCE 1800
MR. RAPPOCCIO
Prerequisite, Spanish 205, 206 or 314 or permission of the instructor. Three hours per week. Three semester hours.

\section*{*088-423. THEATRE OF THE SIGLO DE ORO \\ MR. ESPADAS}

Prerequisite, Spanish 205, 206 or 314 or permission of the instructor. Three hours per week. Three semester hours.

\section*{088-426. MEDIEVAL SPANISH LITERATURE MR. ESPADAS}

The epic, the romance, drama, and early prose, with special emphasis on El Cantar de Mio Cid, El Libro de Buen Amor, El Conde Lucanor, and La Celestina. Prerequisite: Spanish 421, 422, 423, 424, 434 or permission of the instructor. Three hours per week. Three semester hours.

088-427. CERVANTES AND OTHER NOVELISTS OF THE SIGLO DE ORO MR. PAUL Don Quijote, the Novelas Ejemplares, and works of fiction by contemporaries of Cervantes. Prerequisite, Spanish 205, 206 or 314 or permission of the instructor. Three hours per week. Three semester hours.
Spanish 427 alternates with Spanish 423.
088-428. ADVANCED GRAMMAR
DR. REINER
Intended primarily for Spanish majors who plan to teach. Prerequisites: Spanish 314 and at least one year of a Spanish literature course. Three hours per week. Three semester hours.

\section*{090-SOCIOLOGY}

\section*{DR. J. MILLER}

090-201. INTRODUCTION TO SOCIOLOGY
DR. MILLER
A course designed to give the student a more scientific understanding of man's social nature and of the social world in which he lives. In addition to fundamental concepts and theories particular attention is focused on problems arising from race relations and personality disorganization. Not open to freshmen. Three hours per week. Three semester hours.

090-202. INTRODUCTION TO SOCIOLOGY
DR. MILLER
A continuation of Sociology 101. Problems to which particular attention is given include urbanization, public opinion and propaganda, marriage and the family and crime and delinquency. Prerequisite, Sociology 101. Three hours per week. Three semester hours.

\footnotetext{
*This course is not offered in 1975-1976.
}

\section*{COURSES OF INSTRUCTION}

\section*{077-SPEECH}

DR. HENRY
077-201. PUBLIC SPEAKING
DR. HENRY
The composition and presentation of speeches designed to inform, stimulate, persuade, and entertain, with group analysis and criticism. Students will also deliver impromptu speeches and participate in panel discussions on topics of current cultural and social interest. Two hours per week. Two semester hours.

077-202. PUBLIC SPEAKING
DR. HENRY
A continuation of 201 with the addition of the oral interpretation of fiction and poetry, and with a greater emphasis upon individual style and effectiveness. Prerequisite: Speech 201. Two hours per week. Two semester hours.

077-203. DEBATING AND RESEARCH
DR. PERRETEN
This course is organized for students who are interested in debating in intercollegiate tournaments. Prerequisite: Speech 201 or 202 or consent of instructor. One semester hour.

077-204. DEBATING AND RESEARCH
DR. PERRETEN
Continuation of Course 203. Prerequisite, Debating and Research 203. One semester hour.

077-301. DRAMATIC ARTS WORKSHOP
DR. HENRY
An introduction to the elements of theatrical production, with an emphasis upon acting techniques. Students will participate in acting exercises, improvisation and scene study, and will gain practical experience in campus productions. One hour of lecture and two hours of workshop per week. Prerequisite: Speech 201 or 202 or consent of instructor. Two semester hours.

077-302. DRAMATIC ARTS WORKSHOP
DR. HENRY
A continuation of Course 301 with a greater emphasis upon directing techniques and the problems of artistic management. Prerequisite, Speech 301. One hour of lecture and two hours of workshop per week. Prerequisite: Speech 301. Two semester hours.

077-305. DEBATING AND RESEARCH
DR. PERRETEN
This course is an expansion of the elementary methods of argumentation. Open to senior students who have met the requirements of Debating and Research 203 and 204, and who have actively engaged in the summer program of formulating cases and organizing and accumulating rebuttal files. Prerequisite, Debating and Research 203 and 204. One semester hour.

007-306. DEBATING AND RESEARCH
DR. PERRETEN
Continuation of Course 305. Prerequisite, Debating and Research 305. One semester hour.

\section*{SPANISH}

See under Romance Languages

\section*{SPECIAL OFFERINGS}

\section*{College Scholar's Program}

Guided independent study for qualified freshmen in their second term, sophomores and juniors. Each course is credited as three semester hours. (See "The Ursinus Plan" for details.)
201. LANGUAGES DR. RICE AND DIVISIONAL TUTORS
202. LANGUAGES
203. HUMANITIES
204. HUMANITIES
205. SOCIAL SCIENCES
206. SOCIAL SCIENCES

DR. RICE AND DIVISIONAL TUTORS
DR. BYERLY AND DIVISIONAL TUTORS
DR. BYERLY AND DIVISIONAL TUTORS
DR. VISSER AND DIVISIONAL TUTORS
DR. VISSER AND DIVISIONAL TUTORS
207. NATURAL AND PHYSICAL SCIENCES

DR. TAKATS AND DIVISIONAL TUTORS
208. NATURAL AND PHYSICAL SCIENCES

DR. TAKATS AND DIVISIONAL TUTORS

\section*{Departmental Honors}

Guided independent study and research for qualified seniors. Written thesis required. There is a Project Adviser for each course listed below. (See the Ursinus Plan for details.) Three semester hours.
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005-450. BIOLOGY
010-450. CHEMISTRY
016-450. GREEK
017-450. LATIN
020-450. ECONOMICS
032-450. ENGLISH LITERATURE
035-450. GERMAN
040-450. HEALTH AND PHYSICAL
EDUCATION

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045-450. HISTORY

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045-450. HISTORY
050-450. MATHEMATICS
050-450. MATHEMATICS
060-450. PHILOSOPHY-RELIGION
060-450. PHILOSOPHY-RELIGION
065-450. PHYSICS
065-450. PHYSICS
070-450. POLITICAL SCIENCE
070-450. POLITICAL SCIENCE
075-450. PSYCHOLOGY
075-450. PSYCHOLOGY
086-450. FRENCH
086-450. FRENCH
088-450. SPANISH
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088-450. SPANISH

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\section*{027-Intercollege Seminar}

027-202. SEMINAR ON CONTEMPORARY PROBLEMS
An elective course dealing with contemporary issues. The problems are analyzed from philosophical, sociological, psychological, and scientific viewpoints.
Seven class meetings of 90 minutes each. One class is held at each of the participating colleges. Coordinator is in charge.
Open to sophomores and juniors.
Students make own travel arrangements to and from participating colleges. One semester hour.

\section*{COURSES OF INSTRUCTION}

\section*{028-Senior Symposium}

The Senior Symposium is an elective course designed to encourage seniors from all departments to apply their accumulated knowledge to some of the major problems of this age. It is hoped that open discussion of current movements, ideas and values will help the students to move with greater degree of confidence and usefulness in the world after graduation and will result in individual participation and involvement in the great issues of their time. The Symposium, therefore, will deal with meanings and values as well as facts.

028-401. SENIOR SYMPOSIUM
MR. DAVIS AND STAFF
Independent readings and periodic conferences with a Tutor, with emphasis on the Contemporary World. Open only to seniors. Three hours per week. Thren semester hours.

028-402. SENIOR SYMPOSIUM
MR. DAVIS AND STAFF
Discussion in depth of some of the major issues confronting Americans today with particular emphasis on the social foundations of education. Prerequisite, Senior Symposium 401. Three hours per week. Three semester hours.

\section*{030 -World Literature}

030-201. WESTERN LITERATURE STAFF
Critical reading of selected representative works from Western literature. Three hours per week. Three semester hours.

030-202. WESTERN LITERATURE
STAFF
A continuation of World Literature 201. Prerequisite, Course 401. Three hours per week. Three semester hours.
*030-203. NON-WESTERN LITERATURE
STAFF
Critical reading of selected representative works from non-Western literature. Three hours per week. Three semester hours.
*030-204. NON-WESTERN LITERATURE
STAFF
A continuation of World Literature 203. Three hours per week. Three semester hours. World Literature 101, 102 and 203, 204 are offered in alternate years. Student may elect both year courses for credit.

088-332. LATIN AMERICAN STUDIES
MR. PAUL
The historical, political, and socio-economic background of this increasingly important region is brought out in studies based on the works of its major writers, especially those still active on the contemporary scene. Given in English, using texts in translation. Three hours per week. Three semester hours.
(Does not fulfill the Humanities pivotal requirement.)
*This course is not offered in 1975-1976.

\section*{SUGGESTED PROGRAMS}

CLASSICAL STUDIES (B.A.)
Adviser-Professor Wickersham
First Year
English Composition 101, 1026
History 101, 102


Conomics Electives


Conomics Electives


Conomics Electives


Conomics Electives .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6

\section*{Second Year}


Foreign Language 203, 204


Foreign Language 203, 204


Foreign Language 203, 204


Foreign Language 203, 204   (if not completed)   (if not completed)   (if not completed)   (if not completed) .....  .....  ..... 6 .....  .....  ..... 6 .....  .....  ..... 6 .....  .....  ..... 6

Humanities Pivotal

Humanities Pivotal

Humanities Pivotal

Humanities Pivotal .....  ..... 4 .....  ..... 4 .....  ..... 4 .....  ..... 4
Mathematics 213, 214
Mathematics 213, 214
Mathematics 213, 214
Mathematics 213, 214 ..... 6 ..... 6 ..... 6 ..... 6
Social Science Pivotal
Social Science Pivotal
Social Science Pivotal
Social Science Pivotal ..... 6 ..... 6 ..... 6 ..... 6
Second Year
Second Year
Second Year
Second Year
Greek 101, 102 Electives Electives Electives Electives Electives ..... 2 ..... 2 ..... 2 ..... 2 ..... 2
Elective ..... 6 ..... 6 ..... 30 ..... 30 ..... 30 ..... 30 ..... 30
Physical Education 101, 102 ..... -
30 ..... 30
Second Year
Social Science6
Science ..... 6
Greek 203, 204 ..... 6
Latin ..... 6
Electives ..... 6
30
lectives
lectives ..... 30
Economics 435 or 436 ..... 3
Economics Electives ..... 6 ..... 6
Third Year ..... 
6 ..... 
6
Latin or Greek
Latin or Greek
Electives
Electives ..... 21 ..... 21 ..... 30
Third Year
Economics 325, 326 ..... 6
Economics Electives ..... 3
Elective Radial ..... 2
Electives ..... 19
. ..... -
24
Electives ..... -30
Fourth Year
30
ECONOMICS (B.A.)
Adviser-Professor Pilgrim
30
Fourth Year
6
6
Electives
Adviser-Professor Storey
First Year
English Composition 101, 102 ..... 6
Humanities ..... 6
Science ..... 6
Foreign Languages ..... 6
Social Science ..... 6
Physical Education 101, 102 ..... -30
Second Year
English Literature
(Candidates for teaching should take214)12
Foreign Language (if not completed) ..... 6
Radial Courses ..... 6
Other Electives ..... 630


\section*{URSINUS COLLEGE BULLETIN}
\begin{tabular}{|c|c|}
\hline Third Year & Fourth Year \\
\hline English Literature . . . . . . . . . . . . . . . 12 & German 409, 410 or 407,408 or \\
\hline Radial Courses . . . . . . . . . . . . . . . . . . 6 & 415, 416 . . . . . . . . . . . . . . . . . . . . 6 \\
\hline Other Electives . . . . . . . . . . . . . . . . . 12 & German 313, 314 (if not completed) . . 6 \\
\hline & Philosophy . ........................ . 6 \\
\hline 30 & Electives . . . . . . . . . . . . . . . . . . . . . . 12 \\
\hline & \\
\hline Fourth Year & 30 \\
\hline English Literature . . . . . . . . . . . . . . . 6 & \\
\hline Electives . . . . . . . . . . . . . . . . . . . . . . 24 & \\
\hline & \\
\hline 30 & HEALTH AND PHYSICAL \\
\hline & EDUCATION (B.S.) \\
\hline & Adviser-Professor Bailey \\
\hline GERMAN (B.A.) & First Year \\
\hline Adviser-Professor Rice & English Composition 101, \(102 . . . . . . .6\) \\
\hline & History 101, 102 . . . . . . . . . . . . . . . . . . 6 \\
\hline & Foreign Language . . . . . . . . . . . . . . . . 6 \\
\hline First Year & Biology 101, 102 . . . . . . . . . . . . . . . . 6 \\
\hline English Composition 101, \(102 \ldots . . .6\) & Physical Education 131, \(132 \ldots . . . . . .6\) \\
\hline History 101, \(102 . . . . . . . . . . . . . . . . . . .6 .6\) & Physical Education 101, \(102 . . . . . . . . .4\) \\
\hline Science . . . . . . . . . . . . . . . . . . . . . . . . 6 & - \\
\hline German 101, 102 or 203, 204 ........ 6 & 34 \\
\hline Other Language 101, 102 or 203, 204 . 6 & \\
\hline Physical Education 101, 102 & Second Year \\
\hline 30 & Foreign Language (if not completed) . 6 \\
\hline & Biology 317, 318 . . . . . . . . . . . . . . . . 6 \\
\hline & Education 202 . . . . . . . . . . . . . . . . . . 3 \\
\hline Second Year & Education 223 . . . . . . . . . . . . . . . . . . 3 \\
\hline English Literature 203, 204 . . . . . . . . 6 & Education 224 ........................ 3 \\
\hline Psychology 101 . . . . . . . . . . . . . . . . . . 3 & Physical Education 243 ................ 3 \\
\hline Radial Courses . . . . . . . . . . . . . . . . . 6 & Psychology 101 \\
\hline German 203, 204 or 305, \(306 \ldots . .\). . . 6 & Physical Education 244 \\
\hline \begin{tabular}{l}
Other Language 203, 204 \\
(if not completed)
\end{tabular} & Electives ................................... 3 \\
\hline Electives . . . . . . . . . . . . . . . . . . . . . . 3 & 36 \\
\hline 30 & \\
\hline & Third Year \\
\hline & Physical Education 351, \(352 \ldots . .\). . . 4 \\
\hline Third Year & Physical Education 354 .............. 2 \\
\hline German 305, 306 (if not completed) . 6 & Physical Education 355, 356 . . . . . . . . 4 \\
\hline German 407, 408 or 409, 410 or & Physical Education 357, 358 ......... 4 \\
\hline 415, 416 . . . . . . . . . . . . . . . . . . . . . . 6 & Physical Education 361 . . . . . . . . . . . . 3 \\
\hline  & Physical Education 305, \(306 \ldots . .\). . 4 \\
\hline Electives . . . . . . . . . . . . . . . . . . . . . 12 & Electives . . . . . . . . . . . . . . . . . . . . . . 11 \\
\hline \(\overline{30}\) & 32 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{Fourth Year} \\
\hline Education 405 & \\
\hline Education 441 & 2 \\
\hline Education 444 & 3 \\
\hline Physical Education 462 & 2 \\
\hline Physical Education 464 & 3 \\
\hline Physical Education 408 & 2 \\
\hline Psychology 108 & 3 \\
\hline Electives & 5 \\
\hline Physical Education 466 & 2 \\
\hline & 30 \\
\hline
\end{tabular}

\section*{HISTORY (B.A.)}

Adviser-Professor Davis

\section*{First Year}

English Composition 101, \(102 \ldots . . . .6\)
History 101, 102 ...................... . . 6
Science ............................... 6
Foreign Language ....................... 6
Political Science 101, 102 ............. ` 6
Physical Education 101, 102 ...........
Second Year
English Literature 203,204 or 219, 2206
\begin{tabular}{l} 
Foreign Language 203, 204 \\
(if not completed)
\end{tabular}
................. 6

Psychology 101 ........................ . 3
Economics 203, 204 ................... . 6
History 213, 214 ...................... 6
Electives .............................. 3

\section*{Third Year}

Sociology ............................. 3

History Seminar ....................... 2
Electives . . . . . . . . . . . . . . . . . . . . . . . . . 19

\section*{Fourth Year}

History ................................. 8
Electives ............................... 22
MATHEMATICS (B.S.)Adviser-Professor Dennis
First Year
English Composition 101, 102 ..... 6
Foreign Language 101, 102 or 203, 2046
Humanities ..... 6
Mathematics 129, 130 ..... 6
Physics 101, 102 ..... 8
Physical Education 101, 102 ..... -

\section*{Second Year}
Foreign Language 203, 204 (if not completed) ..... 6
Social Science ..... 6
Mathematics 231 ..... 3
Mathematics 233, 234 ..... 6
Radial Courses ..... 6
Electives ..... 330
Third Year
Radial Courses ..... 6
Mathematics ..... 9
Electives ..... 1530
Fourth Year
Mathematics ..... 6
Electives ..... 2228
ALTERNATE MATHEMATICS (B.S.)
Adviser-Professor Dennis
First Year
English Composition 101, 102 ..... 6
30 Foreign Language 101, 102 or 203, 2046
Mathematics 111, 112 ..... 6
Physics 111, 112 ..... 8
Humanities ..... 6
Physical Education 101, 102 ..... -32
Second YearForeign Language 203, 204(if not completed)6
Humanities ..... 6
Mathematics 231 ..... 3
Mathematics 233, 234 ..... 6
Social Science ..... 6
Electives ..... 3
Third Year
Radial Courses ..... 6
Mathematics ..... 9
Electives ..... 15
Fourth Year ..... 30
Mathematics ..... 6
Radial Courses ..... 6
Electives ..... 18 ..... 8
30
PHILOSOPHY AND RELIGION (B.A.)Adviser-Professor Williamson\(\overline{30}\)
First Year
English Composition 101, 102 ..... 6
Foreign Language ..... 6
Science ..... 6
Social Science ..... 6
Philosophy 101, 102 ..... 6
Physical Education 101, 102
Phsical Education 101, 102\(\overline{30}\)



Second Year



Second Year



Second Year



Second Year



Second Year



Second Year


Foreign Language 203, 204


Foreign Language 203, 204


Foreign Language 203, 204


Foreign Language 203, 204


Foreign Language 203, 204


Foreign Language 203, 204    (if not completed)    (if not completed)    (if not completed)    (if not completed)    (if not completed)    (if not completed) .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6


Religion 201, 202


Religion 201, 202


Religion 201, 202


Religion 201, 202


Religion 201, 202


Religion 201, 202 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6 .....  .....  .....  ..... 6


Radial Courses


Radial Courses


Radial Courses


Radial Courses


Radial Courses


Radial Courses .....  .....  ..... 12 .....  .....  ..... 12 .....  .....  ..... 12 .....  .....  ..... 12 .....  .....  ..... 12 .....  .....  ..... 12
Electives in Area of Concentration
Electives in Area of Concentration
Electives in Area of Concentration
Electives in Area of Concentration
Electives in Area of Concentration
Electives in Area of Concentration ..... 3 ..... 3 ..... 3 ..... 3 ..... 3 ..... 3
Electives
Electives
Electives
Electives
Electives
Electives ..... 3 ..... 3 ..... 3 ..... 3 ..... 3 ..... 3



30



30



30



30



30


Third Year


Third Year


Third Year


Third Year


Third Year


Philosophy or Religion


Philosophy or Religion


Philosophy or Religion


Philosophy or Religion


Philosophy or Religion .....  .....  ..... 15 or 18 .....  .....  ..... 15 or 18 .....  .....  ..... 15 or 18 .....  .....  ..... 15 or 18 .....  .....  ..... 15 or 18
Electives in Area of
Electives in Area of
Electives in Area of
Electives in Area of
Electives in Area of
Concentration
Concentration
Concentration
Concentration
Concentration ..... 6 or 9 ..... 6 or 9 ..... 6 or 9 ..... 6 or 9 ..... 6 or 9
Electives
Electives
Electives
Electives
Electives ..... 6 or 9 ..... 6 or 9 ..... 6 or 9 ..... 6 or 9 ..... 6 or 9 ..... r 9 ..... r 9 ..... r 9 ..... r 9 ..... r 9

\section*{Fourth Year \\ ourth Year}
Philosophy or Religion ..... 3
Senior Seminar 401, 402 ..... 6
Electives in Area of
Concentration ..... 3 or 6
Electives ..... 18 or 21
30
PHYSICS (B.S.)Adviser-Professor Snyder
First Year
English Composition 101, 102 ..... 6
Foreign Language ..... 6
Chemistry 111, 112 ..... 8
Mathematics 111, 112 ..... 6
Physics 111, 112 ..... 8
Physical Education 101, 10234




Second Year




Second Year




Second Year




Second Year




Second Year




Second Year




Second Year
Humanitres
Humanitres
Humanitres
Humanitres
Humanitres
Humanitres
Humanitres ..... 6 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6
Mathematics 231, 232
Mathematics 231, 232
Mathematics 231, 232
Mathematics 231, 232
Mathematics 231, 232
Mathematics 231, 232
Mathematics 231, 232 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6
Physics 203, 204
Physics 203, 204
Physics 203, 204
Physics 203, 204
Physics 203, 204
Physics 203, 204
Physics 203, 204 ..... 8 ..... 8 ..... 8 ..... 8 ..... 8 ..... 8 ..... 8
Physics 207, 208
Physics 207, 208
Physics 207, 208
Physics 207, 208
Physics 207, 208
Physics 207, 208
Physics 207, 208 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6
Physics 207a, 208a
Physics 207a, 208a
Physics 207a, 208a
Physics 207a, 208a
Physics 207a, 208a
Physics 207a, 208a
Physics 207a, 208a ..... 2 ..... 2 ..... 2 ..... 2 ..... 2 ..... 2 ..... 2
Electives
Electives
Electives
Electives
Electives
Electives
Electives ..... 3 ..... 3 ..... 3 ..... 3 ..... 3 ..... 3 ..... 3 ..... 31 ..... 31 ..... 31 ..... 31 ..... 31 ..... 31 ..... 31
Third Year
Mathematics 339, 340 ..... 6
Physics 315, 316 ..... 6
Radial Courses ..... 6
Social Science ..... 6
Electives ..... 6
30
Fourth Year
Physics Courses ..... 6
Radial Courses ..... 6
Electives ..... 18

\section*{POLITICAL SCIENCE (B.A.)}

\author{
Adviser-Professor E. H. Miller
}

\section*{First Year}

English Composition 101, \(102 \ldots \ldots .\).
History 101, 102 ....................... 6
Science
Second Year
Foreign Language 203, 204 (if not completed) ..... 6
Mathematics 213, 214 ..... 4
Psychology 101, 108 or Humanities ..... 6
Psychology 210 ..... 4
Psychology 334 ..... 3
Foreign Language ..... 6
Political Science 101, 102 ..... 6
Physical Education 101, 102
Radial Courses ..... 3Biology 321, 3225-
Second Year
Foreign Language 203, 204(if not completed)6
Psychology 101 ..... 3
Economics 101, 102 ..... 6
Political Science 205, 206 ..... 6
Political Science 215, 216 ..... 6
Electives ..... 3
Third Year
Sociology 101, 102 ..... 6
History 213, 214
Political Science
Electives
Radial Courses
Fourth Year
Political Science ..... 3
Electives ..... 27
30 History 101, 102 ..... 6
ROMANCE LANGUAGESFRENCH (B.A.)Adviser-Professor Reiner
First Year
English Composition 101, 102 ..... 6
Science ..... 6
French 203, 204 ..... 6
Foreign Language ..... 6
PSYCHOLOGY (B.S.)
Adviser-Professor Fago
First Year
English Composition 101, 102 ..... 6
Foreign Language ..... 6
Mathematics 101, 102, 213, 214 ..... 6
Physical Education 101, 102 ..... -
Physical Education 101, 102 ..... \(\overline{30}\)
Second Year
English Literature 203, 204 ..... 6
Social Science (Pivotal) ..... 6
French 205, 206 ..... 6
French 315, 316 ..... 6
Foreign Language 203, 204
(if not completed, or other radial course) ..... 6
6
6 ..... 8 ..... 8 ..... 4 ..... 4 ..... 6 ..... 6
30Psychology 409, 4406
Third Year ..... 6Sociology 101, 102
Anthropology 101, 102 ..... 6
Psychology 331 or 333 ..... 4
Psychology 335, 336 ..... 3 or 4
Radial Courses ..... 9
Electives ..... 2
30 or 31
Fourth Year
Psychology ..... 3
Electives ..... 20\(\overline{30}\)
\begin{tabular}{|c|c|}
\hline Third Year & Fourth Year \\
\hline History 203, 204 or 205, \(206 \ldots . . . . . .6\) & Spanish 423, 426 or 421, \(422 \ldots \ldots \ldots .6\) \\
\hline French 311, 312 or \(313,314 \ldots . . . . .6\) & Electives . . . . . . . . . . . . . . . . . . . . . . . . 24 \\
\hline French 421, 422 or \(423,424 \ldots . . . . .6\) & - \\
\hline Electives . . . . . . . . . . . . . . . . . . . . . . . . 12 & 30 \\
\hline & \\
\hline 30 & SCIENCES (B.S.) \\
\hline Fourth Year & PREPARATION FOR SECONDARY \\
\hline Electives . . . . . . . . . . . . . . . . . . . . . . . 30 & SCHOOL TEACHING IN THE SCIENCES \\
\hline Elective - & I. CONCENTRATION IN BIOLOGY \\
\hline 30 & Advisers-Professor Allen and \\
\hline & Professor Cogger \\
\hline & First Year \\
\hline SPANISH (B.A.) & Biology 111, 112 . . . . . . . . . . . . . . . . 8 \\
\hline & Chemistry 111, 112 . . . . . . . . . . . . . . . 8 \\
\hline Adviser-Professor Reiner & English Composition 101, \(102 \ldots . . .6\) \\
\hline First Year & Language 101, 102 or 203, 204 . . . . . . 6 \\
\hline English Composition 101, 102 ........ 6 & Physical Education 101, 102 \\
\hline History 101, 102 . . . . . . . . . . . . . . . . . 6 & 28 \\
\hline Science . . . . . . . . . . . . . . . . . . . . . . . . . 6 & Second Year \\
\hline Spanish 203, 204 . . . . . . . . . . . . . . . . . 6 & Physics 111, 112 . . . . . . . . . . . . . . . . . 8 \\
\hline Foreign Language ................... 6 & Mathematics 111, \(112 \ldots . . . . . . . . . . . . .6\) \\
\hline Physical Education .................. - & Biology 321, 322 . . . . . . . . . . . . . . . . . 5 \\
\hline & Psychology 101, 108 . . . . . . . . . . . . . . 6 \\
\hline 30 & Education 202 . . . . . . . . . . . . . . . . . . . 3 \\
\hline Second Year & Language 203, 204 \\
\hline English Literature 203, 204 . . . . . . . . . . 6 & Pivoral \({ }_{\text {or }}^{\text {H }}\) \\
\hline Social Science (Pivotal) . . . . . . . . . . . 6 & Pivotal Humanities \\
\hline Spanish 205, 206 . . . . . . . . . . . . . . . . . 6 & 34 \\
\hline  & Third Year 34 \\
\hline Foreign Language 203, 204 (if not completed or other radial course) . . 6 & Biology 317, 318 . . . . . . . . . . . . . . . . . 6 \\
\hline completed or other radial course) . . 6 & Biology 415 . . . . . . . . . . . . . . . . . . . . . . 3 \\
\hline 30 & Biology 314 or 319 . . . . . . . . . . . . . . . 4 \\
\hline 30 & Education 223, 224 . . . . . . . . . . . . . . . 6 \\
\hline Third Year & Pivotal Humanities \\
\hline History . . . . . . . . . . . . . . . . . . . . . . 6 & \\
\hline Spanish 421, 422 or 423, \(426 \ldots \ldots . .6\) & Radial Electives . . . . . . . . . . . . . . . . . . . 6 \\
\hline Spanish 310, 427 . . . . . . . . . . . . . . . . 6 & Radial Electives . . . . . . . . . . . . . . . . . 6 \\
\hline Electives . . . . . . . . . . . . . . . . . . . . . . . 12 & - \\
\hline - & Ourth Year 31 \\
\hline & Education 405 ........................ 8 \\
\hline Fourth Year & Education 441, 443 . . . . . . . . . . . . . . . . 3 \\
\hline Spanish 422 or 427 .................. . 3 & Education 444 . . . . . . . . . . . . . . . . . . . 3 \\
\hline Spanish 428 ........................ 3 & Biology Electives . . . . . . . . . . . . . . . . 2 \\
\hline Electives . . . . . . . . . . . . . . . . . . . . . . . 12 & Radial and Free Electives . . . . . . . . . . 14 \\
\hline Education Semester ................. 14 & Radial and Free Electives \\
\hline \(\overline{32}\) & 30 \\
\hline 32 & \\
\hline
\end{tabular}

\section*{II. CONCENTRATION IN CHEMISTRY}

\author{
Advisers-Professor Staiger and Professor Cogger
}

\section*{First Year}

Chemistry 111, 112 .................... . 8
Physics 111, 112 . . . . . . . . . . . . . . . . . . . . 8
Mathematics 111, 112 . . . . . . . . . . . . . .
English Composition 101, \(102 \ldots \ldots\). . . 6
Language 101, 102 or \(203,204 \ldots \ldots .6\)
Language 101, 102 or 203, 204
Physical Education 101, 102

\section*{III. CONCENTRATION IN PHYSICS}

\author{
Advisers-Professor Snyder and Professor Cogger
}

First Year
Physics 111, 112 ....................... . . 8
Mathematics 111, 112 .................. . . 6
6 English Composition 101, 102 ......... . 6
6 Language 101, 102 or 203, \(204 \ldots .\). . . . 6
6 Pivotal Courses . . . . . . . . . . . . . . . . . . . . 6
Physical Education 101, \(102 \ldots . .\). .
-

32

\section*{Second Year}

Chemistry 207, 208 . . . . . . . . . . . . . . . . . 8
Chemistry 203, Physics 204 . . . . . . . . . . 8
Psychology 101 ........................... . . 3
Education 202 . . . . . . . . . . . . . . . . . . . . 3
Language 203, 204
or
Humanities ............................. . 6
Electives
3

31

\section*{Third Year}

Chemistry Electives
6

Geology 101, 102
6
Humanities ..... 3
Education 223, 224 ..... 6
Electives ..... 3

\section*{Fourth Year}

Education 441, 443 ...................... 3 Education 441
Education 444 3 Education 443 ..... 1
Education 405 8 Physics 211, 212 ..... 6
Electives 10 Electives ..... 10 ..... -
30

Psychology 101 .......................... . . . 32

\section*{Second Year}
Physics 203, 204 ..... 8
Mathematics 231, 232 ..... 6
Education 202 ..... 3
Language 203, 204 ..... 6

Electives . . . . . . . . . . . . . . . . . . . . . . . . . . . 6Psychology 101332
Third Year

6 Chemistry 111, 112 ....................... . . 8

Biology 101, 102 Physics 207, 208 .......................... 6

Education 223, 224 . .................... 6

Electives . . . . . . . . . . . . . . . . . . . . . . . . . 9
Electives ..... 929
Fourth Year
Education 405 ..... 8

\section*{URSINUS COLLEGE BULLETIN}
COURSE OUTLINEPROGRAM LEADING TO GENERALSCIENCE CERTIFICATION FORIUNIOR HIGH SCHOOL ANDNON-COLLEGE PREPARATORYSENIOR HIGH SCHOOL
Advisers-Professor Snyder and Professor Cogger
First Year

\section*{Third Year}
English Composition 101, 1026
Language 101, 102 or 203, 2046
Mathematics 111, 112 or 129,130 ..... 6
Physics 111, 112
or
Chemistry 111, 112 ..... 8
Pivotal Courses ..... 6
Physical Education 101, 102 ..... -
32
Second Year
Biology 101, 102 ..... 6
or
Biology 111, 112 ..... 8
Education 202 ..... 3
Physics 111, 112or
Chemistry 111, 112 ..... 8
Psychology 101 ..... 3
Elective ..... 3
Pivotal Courses ..... 6

\section*{SUGGESTED PROGRAMS}
FIVE-YEAR COMBINED LIBERAL ARTS - ENGINEERING PROGRAM URSINUS COLLEGE (B.A.), THE UNIVERSITY OF PENNSYLVANIA, THE UNIVERSITY OF SOUTHERN CALIFORNIA, AND THE GEORGIA INSTITUTE OF TECHNOLOGY (B.S. in Engr.)
Adviser-Professor Snyder
PLAN I FOR ELECTRICAL, CIVIL OR MECHANICAL ENGINEERS
First Year
English Composition 101, 102 ..... 6
Foreign Language 203, 204 ..... 6
Chemistry 111, 112 ..... 8
Mathematics 111, 112 ..... 6
Physics 111, 112 ..... 8
Physical Education 101, 102-
Second Year
Radial Courses ..... 6
Humanities ..... 6
Physics 203, 204 ..... 8
Mathematics 231, 232 ..... 6
Drafting ..... 3
Descriptive Geometry ..... 3
Third Year
Radial Courses ..... 6
Social Science ..... 6
Physics 207, 314 ..... 6
Mathematics 339, 340 ..... 6
Electives ..... 6\(\overline{30}\)Fourth and Fifth Yearsto be completed at the University ofPennsylvania, the University of SouthernCalifornia, or the Georgia Institute ofTechnology.-34
\(\qquad\)

\section*{PLAN II FOR CHEMICAL OR METALLURGICAL ENGINEERS}
First Year
English Composition 101, 102 ..... 6
Foreign Language ..... 6
Chemistry 111,112 ..... 8
Mathematics 111, 112 ..... 6
Physics 111, 112 ..... 8
Physical Education 101, 102 ..... -34
Second Year
Radial Courses ..... 6
Humanities ..... 6
Chemistry 203 ..... 4
Physics 204 ..... 4
Drafting ..... 3
Mathematics 231, 232 ..... 6
Social Science
Social Science
Social Science
Social Science
Social Science
Social Science ..... 6 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6
Chemistry 309, 310
Chemistry 309, 310
Chemistry 309, 310
Chemistry 309, 310
Chemistry 309, 310
Chemistry 309, 310 ..... 8 ..... 8 ..... 8 ..... 8 ..... 8 ..... 8
Physics 203
Physics 203
Physics 203
Physics 203
Physics 203
Physics 203 ..... 4 ..... 4 ..... 4 ..... 4 ..... 4 ..... 4
Mathematics 339, 340
Mathematics 339, 340
Mathematics 339, 340
Mathematics 339, 340
Mathematics 339, 340
Mathematics 339, 340 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6 ..... 6
Electives
Electives
Electives
Electives
Electives
Electives ..... 3 ..... 3 ..... 3 ..... 3 ..... 3 ..... 3
Third Year
Third Year
Third Year
Third Year
Third Year
Third Year
Radial Courses
Radial Courses
Radial Courses
Radial Courses
Radial Courses
Radial Courses ..... 33 ..... 33 ..... 33 ..... 33 ..... 33 ..... 33
Fourth Year
to be completed at the University ofPennsylvania, the University of SouthernCalifornia, or the Georgia Institute ofTechnology.
STUDENTS WHO WISH TO PREPARE FOR TEACHING, THE MINISTRY, OR FOR ADMISSION TO PROFESSIONAL SCHOOLS OF MEDICINE, DENTISTRY, VETERINARY MEDICINE, LAW OR NURS- ING SHOULD REFER TO "THE ADMIS- SION SECTION (CAREER OPPORTUNI- TIES)" WHERE SUGGESTED MAJORS ARE INDICATED.

\section*{DIRECTORY}

\section*{BOARD OF DIRECTORS}First TermElected Expires
JAMES M. ANDERSON, Wynnewood ..... 1967 ..... 1977
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RUSSELL C. BALL, JR., B.S., Paoli ..... 1968 ..... 1978
JOSEPH T. BEARDWOOD, III, B.S., Glenside ..... 1968 ..... 1978
THOMAS J. BEDDOW, B.A., J.D., LL.D., Washington, D.C ..... 1958* ..... 1979
REV. C. EUGENE BLUM, B.A., B.D., D.D., York ..... 1950 ..... 1975
RALPH CONNOR, B.S., Ph.D., LL.D., Sc.D., Wyncote ..... 1971 ..... 1976
PHILIP L. CORSON, B.A., LL.D., Plymouth Meeting ..... 1960 ..... 1975
JOSEPH L. EASTWICK, B.A., LL.D., Philadelphia ..... 1962 ..... 1977
WILLIAM ELLIOTT, LL.D., Collegeville ..... 1964 ..... 1979
MILLARD E. GLADFELTER, A.B., A.M., Ph.D., Sc.D., LL.D., D.H.L., D.C.L., L.H.D., Litt.D., Jenkintown ..... 1967 ..... 1977
THOMAS P. GLASSMOYER, B.A., LL.B., LL.D., Willow Grove ..... 1956** ..... 1977
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DONALD L. HELFFERICH, B.A., J.D., LL.D., Pottstown ..... 1927 ..... 1977
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HENRY P. LAUGHLIN, B.S., M.D., Bethesda, Md. ..... 1967 ..... 1977
ALEXANDER LEWIS, JR., B.S., M.S., Ph.D., Sc.D., Pittsburgh ..... 1972 ..... 1977
D. STERLING LIGHT, B.A., Norristown ..... 1947 ..... 1977

\footnotetext{
*Did not serve 1968-1969
**Did not serve 1966-1967
}
REV. SHELDON E. MACKEY, B.A., B.D., D.D., LL.D., Glenside 1960 ..... 1976
ELLWOOD S. PAISLEY, B.S., LL.D., Philadelphia ..... 1979
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*Listed in order of appointment to present rank; appointments of the same year are listed alphabetically.
}

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B.S., Ursinus College; M.A., Cornell University; Ph.D., University of Illinois.

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B.S., Ursinus College; M.A., Ph.D., University of Pennsylvania.

RICHARD MUMMA FLETCHER, Ph.D., Professor of Psychology
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B.S., Ursinus College; M.S., Ph.D., University of Pennsylvania.

WILLIAM BEDFORD WILLIAMSON, Ed.D., D.D., Professor of Philosophy B.S., S.T.B., Ed.D., Temple University; S.T.M., Lutheran Theological Seminary; M.A., Lehigh University; D.D., National University.

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A.B., Franklin and Marshall College; B.D., Yale University Divinity School;
S.T.M., Union Theological Seminary; Ph.D., University of Pennsylvania.

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B.A., Ursinus College; M.A., University of Pennsylvania.

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B.A., Ursinus College; M.A., Ph.D., University of Pennsylvania.

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BLANCHE BEATRICE SCHULTZ, M.S., Professor of Mathematics B.S., Ursinus College; M.S., University of Michigan.

RAYMOND VICTOR GURZYNSKI, M.Ed., Professor of Health and Physical Education
B.S., Ursinus College; M.Ed., Temple University.

ELMORE EDGAR POGAR, M.S., Visiting Professor of Education B.S., Mansfield State College; M.S., Cornell University.

ALFRED LEON CREAGER, B.D., D.D., Associate Professor of the History of the Christian Church
B.S., Ursinus College; B.D., The Theological Seminary, Lancaster; D.D., Ursinus College.

GEOFFREY DOLMAN, M.A., Dean of Admissions; Associate Professor of English
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FREDERICK DONALD ZUCKER, Ph.D., Associate Professor of Political Science B.A., Rutgers University; M.A., Ph.D., Pennsylvania State University.

ROBERT STEARNS HOWARD, Ph.D., Associate Professor of Biology
B.S., University of Chicago; M.S., University of Miami; Ph.D., Northwestern University.

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B.A., University of Delaware; M.A., University of Pennsylvania.

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WALTER WOODROW MARSTELLER, B.S., Associate Professor of Physics B.S., Ursinus College.

RUTH ROTHENBERGER HARRIS, M.A., LL.D., Dean of Women; Director of Student Activities
B.S., Ursinus College, M.A., Columbia University; LL.D., Ursinus College.

DERK VISSER, Ph.D., Associate Professor of History
M.A., University of Pennsylvania; Ph.D., Bryn Mawr College.

RICHARD GROTH BOZORTH, Ph.D., Dean of the College, Associate Professor of English
B.A., University of Pennsylvania; M.A., Ph.D., Princeton University.

WALTON EVANS LANDES, M.S. in Ed., Associate Professor of Education B.A., Bluffton College; M.S. in Ed., University of Pennsylvania.

JAMES PRESSLEY CRAFT, JR., Ph.D., Assistant Dean of the College; Associate Professor of Political Science
B.S., U.S. Naval Academy; M.S., Massachusetts Institute of Technology; Ph.D., University of Pennsylvania.

RAY KARL SCHULTZ, Ph.D., Associate Professor of Chemistry B.S., Muhlenberg College; M.S., Ph.D., Lehigh University.

HARRY CLAY SYMONS, M.A., Associate Professor of Economics B.A., M.A., Pennsylvania State University.

ALbert lester Reiner, Ph.D., Associate Professor of Romance Languages A.B., M.A., Ph.D., Harvard University.

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Associate Professor of Education
B.A., State University of New York at Albany; M.A., Ph.D., Yale University.

ALbert Curtis allen, JR., Ph.D., Associate Professor of Biology B.A., College of Wooster; M.A., Ph.D., University of Michigan.

RONALD EUGENE HESS, Ph.D., Associate Professor of Chemistry B.S., Lock Haven State College; Ph.D., Cornell University.

JOHN DAVID PILGRIM, Ph.D., Associate Professor of Economics B.A., Grinnell College; Ph.D., Vanderbilt University.

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B.S., University of Maine; M.S., Springfield College.

JANE ANN BARTH, M.A., Assistant Professor of Chemistry B.A., Mount Holyoke College; M.A., Smith College.

GAYLE ARMISTEAD BYERLY, Ph.D., Assistant Professor of English A.B., Goucher College; M.A., Ph.D., University of Pennsylvania.

ADELE PACK BOYD, M.Ed., Assistant Professor of Health and Physical Education
B.S., Ursinus College; M.Ed., Temple University.

MARGARET BROWN STAIGER, B.A., Senior Assistant Librarian B.A., Ursinus College.

HUGHAN CONRAD MEYER, JR., M.A., Assistant Professor of Economics B.A., Ursinus College; M.A., University of Pennsylvania.

ESTHER SIDNEY COPE, Ph.D., Assistant Professor of History A.B., Wilson College; M.A., University of Wisconsin; Ph.D., Bryn Mawr College.

LOUIS AUBREY DE CATUR, Ph.D., Assistant Professor of English
A.B., M.A., Ph.D., University of Maryland.

GEORGE C. FAGO, Ph.D., Assistant Professor of Psychology
A.B., Franklin and Marshall College; M.S., Ph.D., University of Pittsburgh

KEITH JORDAN HARDMAN, Ph.D., Assistant Professor of Philosophy and Religion
B.A., Haverford College; B.D., Princeton Theological Seminary; M.A., Columbia University; Ph.D., University of Pennsylvania.

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B.A., M.A., Ph.D., American University

RICHARD STUART BREMILLER, M.A., Assistant Professor of Mathematics
B.S., United States Merchant Marine Academy; M.S., Drexel Institute of Technology; M.A., University of Delaware.

ROBERT RAND DAVIDSON, M.S., Assistant Professor of Health and Physical Education
B.S., Northeastern University; M.S., Springfield College.

JOYCE ELIZABETH HENRY, Ph.D., Assistant Professor of English
B.A., University of Michigan; M.A., Ph.D., University of Wisconsin.

EMIL SAMUEL PAUL, M.A., Assistant Professor of Romance Languages
B.S., North Texas State University; M.A., Rutgers State University.

MARVIN ELIJAH REED, Ph.D., Assistant Professor of History
B.A., Stetson University; M.A., Ph.D., Tulane University.

RICHARD PAUL RICHTER, M.A., Vice President for Administrative Affairs; Assistant Professor of English
B.A., Ursinus College; M.A., University of Pennsylvania.

PETER FORREST SMALL, Ph.D., Assistant Professor of Biology
B.S., Austin Peay State University; M.S., East Tennessee State University; Ph.D., Miami University.

MARTHA CARROLL TAKATS, Ph.D., Assistant Professor of Physics
B.A., Wellesley College; M.S., University of Wisconsin; Ph.D., University of Pennsylvania.

JOHN MOORE WICKERSHAM, Ph.D., Assistant Professor of Classics B.A., M.A., University of Pennsylvania; B.A., New College, Oxford; Ph.D., Princeton University.

PETER GORDON JESSUP, Ph.D., Assistant Professor of Mathematics A.B., Kenyon College; M.S., Ph.D., Lehigh University.

JAMES CARLETON MILLER, Ph.D., Assistant Professor of Anthropology and Sociology
B.A., Wilmington College; Ph.D., Washington University.

PETER FLINT PERRETEN, Ph.D., Assistant Professor of English B.A., Moorhead State College; M.A., Idaho State University; Ph.D., University of Delaware.

CHARLES THOMAS SULLIVAN, Ph.D., Assistant Professor of Psychology B.A., Swarthmore College; M.A., Ph.D., New York University.

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B.A., Ursinus College; A.M., University of Pennsylvania; Ph.D., University of Kansas.

HOWARD RINEHART LODGE, Ph.D., Assistant Professor of Psychology B.A., Franklin and Marshall College; Ph.D., Indiana University.

DeANN KELLER SPRINGER, Ph.D., Assistant Professor of Romance Languages B.A., Smith College; M.A., Ph.D., New York University.

ANNETTE VOCK LUCAS, M.A., Instructor in French B.A., George Washington University; M.A., New York University.

JANE PERRETEN SHINEHOUSE, P.T., Instructor in Biology
B.S., Ursinus College; P.T., University of Pennsylvania.

CONSTANCE WARREN POLEY, B.S., Instructor in Health and Physical Education
B.S., Ursinus College.

KATHERINE WOOD KNEAS, B.S. in L.S., Assistant Librarian
B.S., Ursinus College; B.S. in L.S., Drexel Institute of Technology.

JUDITH EMMA FRYER, M.S. in L.S., Assistant Librarian
B.A., Ursinus College; M.S. in L.S., Drexel Institute of Technology.

JOHN JUSTIN McCARTHY, LL.B., Instructor in Economics
B.A., University of North Carolina; LL.B., University of Pennsylvania.

JAMES HOUGHTON KANE, M.A., Instructor in Political Science
B.A., Houghton College; M.A., University of Pennsylvania.

PHILIP JOSEPH RAPPOCCIO, M.A., Instructor in Romance Languages
B.A., M.A., Rutgers, The State University.

JANET MUNRO BROWN, B.A., Assistant Librarian
B.A., University of Pennsylvania

JUAN ESPADAS, M.A., Instructor in Romance Languages
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DERQ HOWLETT, M.S., Instructor in Music
B.A., Princeton University; M.S., West Chester State College.

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B.S., University of Kansas; M.S., Ph.D., Cornell University.

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B.A., University of California; M.S., West Chester State College.

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JAMES JESSE FEIJO, M.S., Instructor in Health and Physical Education B.S., M.S., Springfield College.

ANNE YOUNG PILGRIM, M.A.L.S., Assistant Librarian
B.A., Grinnell College; M.A.L.S., University of Michigan.

MARILYN DEMUTH QUINN, M.S. in L.S., Assistant Cataloguer Librarian B.A., Clark University; M.S. in L.S., Drexel University.

MARY ANN HOLMGREN CLAUSEN, M.A., Teaching Fellow in German
B.A., Ursinus College; M.A., Johns Hopkins University.

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The Robert Trucksess Prize - William Edgar Slack, Jr.
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Doctor of Science
Doctor of Science
Doctor of Humane Letters
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Vice-President - Mrs. Charles Dando, '45, 615 Bridle Rd., Glenside, Pa. 19038
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Mrs. Alfred Taxis, '36, 1414 Powell St., Norristown, Pa. 19401
E. Eugene Shelley, Esq., '37, 35 N. George St., York, Pa. 17401

\section*{COLLEGE CALENDAR FOR 1975}


\section*{COLLEGE CALENDAR FOR 1976}
\begin{tabular}{|c|c|c|c|}
\hline January & 5 & Monday & Christmas Recess ends, 8:00 A.M. \\
\hline January & 13 & Tuesday & Last day of classes \\
\hline January & 15 & Thursday & First Semester examinations begin \\
\hline January & 22 & Thursday & First Semester examinations end \\
\hline January & 26 & Monday & Last day for filing financial aid applications \\
\hline February & 2 & Monday & Second Semester begins, 8:00 A.M. Registration of New Students \\
\hline March & 19 & Friday & Mid-Semester grades due, 4:00 P.M. \\
\hline March & 19 & Friday & Spring Recess begins, 5:30 P.M. \\
\hline March & 24 & Wednesday & Mid-Semester grades mailed \\
\hline March & 29 & Monday & Spring Recess ends, 8:00 A.M. \\
\hline March & 31 & Wednesday & Pre-Registration begins \\
\hline April & 15 & Thursday & Easter recess begins, 5:30 P.M. \\
\hline April & 20 & Tuesday & Easter recess ends, 8:00 A.M. \\
\hline May & 18 & Tuesday & Last day of classes \\
\hline May & 20 & Thursday & Second Semester examinations begin \\
\hline May & 27 & Thursday & Second Semester examinations end \\
\hline May & 29 & Saturday & Alumni Day \\
\hline May & 30 & Sunday & Baccalaureate Service, 10:00 A.M. \\
\hline May & 30 & Sunday & Commencement, 2:00 P.M. \\
\hline June & 2 & Wednesday & Summer School Begins, 8:00 A.M. \\
\hline August & 25 & Wednesday & Summer School ends, 5:30 P.M. \\
\hline Septembe & & Saturday & Freshman Program begins, Academic Convocation 4:00 P.M. \\
\hline Septembe & & Monday & Registration of New Students \\
\hline Septembe & & Tuesday & Second day of Registration \\
\hline Septembe & & Wednesday & First Semester begins, 8:00 A.M. \\
\hline
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\section*{KEY TO THE CAMPUS}
1. Pfahler Hall of Science (laboratories, classrooms, Evening School)
2. Curtis Hall, dormitory for men
3. Wilkinson Hall, lounge and dormitory for men
4. Brodbeck Hall, dormitory for men
5. Myrin Library
6. Bomberger Memorial Hall
7. College Book Store
8. College Union
9. Corson Hall (Admissions Office)
10. Studio Cottage
11. Infirmary
12. Maintenance Building
13. Paisley, Stauffer, Beardwood Halls, dormitories for women
14. D. L. Helfferich Hall and The William Elliott Pool
15. Thompson-Gay Gymnasium
16. Heating and Power Plant
17. Wismer Hall (dining, theater, classrooms)
18. Dormitory for women, 944 Main Street
19. Dormitory for women, 942 Main Street
20. Fircroft Hall, dormitory for men, 940 Main Street
21. Isenberg Hall, dormitory for men, 801 Main Street
22. Todd Hall, dormitory for women, 724 Main Street
23. Omwake Hall, dormitory for men, 701 Main Street
24. Schaff Hall, dormitory for women, 646 Main Street
25. Olevian Hall, dormitory for women, 640 Main Street
26. Zwingli Hall, U.C.C. Conf. Hdq., 620 Main Street
27. Duryea Hall, dormitory for women, 612 Main Street
28. Shreiner Hall, dormitory for women, 6 th Avenue and Main Street
29. South Hall, dormitory for women, 6 th Ave.
30. Hobson Hall, dormitory for women, 568 Main Street
31. Fetterolf House, Fine Art Studio, 554 Main Street
32. Super House, 542 Main Street
33. Trinity Church, United Church of Christ
34. The Parsonage, 522 Main Street
35. Maples Hall, dormitory for men, 520 Main Street
36. Keigwin Hall, dormitory for women, 513 Main Street
37. Clamer Hall, dormitory for women, 409 Main Street
38. Dormitory for men
39. 777 Main Street, dormitory for women
40. Life Science Building```


[^0]:    Checks should be made payable to URSINUS COLLEGE

[^1]:    PRIVATE MUSICAL INSTRUCTION. A fee of $\$ 150$ is charged for any students wishing private individual instruction in voice or on the piano, organ or

[^2]:    * This course is not offered in 1975-1976.

[^3]:    * This course is not offered in 1975-1976.

[^4]:    *This course is not offered in 1975-1976.

[^5]:    *This course is not offered in 1975-1976.

