



1-1973

Ursinus College Catalogue for the One Hundred and Fourth Academic Year, 1973-1974

Office of the Registrar
Ursinus College

Follow this and additional works at: <https://digitalcommons.ursinus.edu/uccatalog>

 Part of the [Higher Education Commons](#), and the [United States History Commons](#)

Click here to let us know how access to this document benefits you.

Recommended Citation

Registrar, Office of the, "Ursinus College Catalogue for the One Hundred and Fourth Academic Year, 1973-1974" (1973). *Ursinus College Catalogues*. 34.

<https://digitalcommons.ursinus.edu/uccatalog/34>

This Book is brought to you for free and open access by the Ursinusiana Collection at Digital Commons @ Ursinus College. It has been accepted for inclusion in Ursinus College Catalogues by an authorized administrator of Digital Commons @ Ursinus College. For more information, please contact aprock@ursinus.edu.

Ursinus College

Bulletin

catalog volume 71 — number 1



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.

Vol. LXXI

No. 1

URSINUS COLLEGE BULLETIN

Catalog Number

January 1973

Entered as second class matter at the Post Office, Collegeville, Pa. under the Act of Aug. 24, 1912.

The Bulletin is published in January, February, May, August, September, November and December, by Ursinus College, Collegeville, Penna. 19426, Telephone (215) 489-4111.

THE
URSINUS
COLLEGE
BULLETIN

1973-1974

CATALOG
NUMBER
For The
ONE HUNDRED AND FOURTH
ACADEMIC
YEAR

COLLEGEVILLE
PENNSYLVANIA
19426
JANUARY 1973

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

Director of Alumni 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

The Dean of Men

SOCIAL REGULATIONS AND DORMITORIES FOR WOMEN

The Dean of Women

ALUMNI AFFAIRS

Director of Alumni Affairs

The Post Office address is Collegeville, Pennsylvania 19426

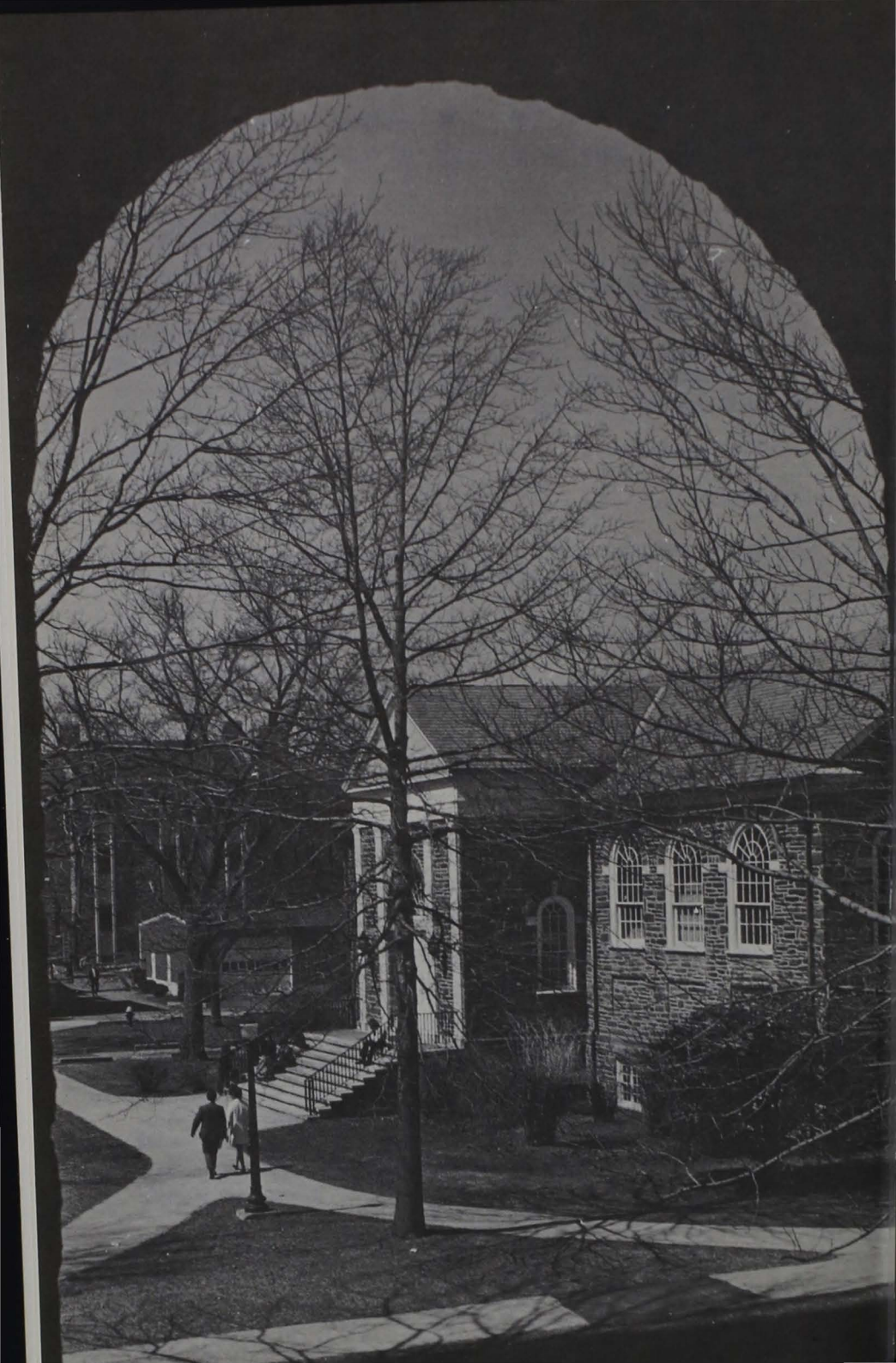
The College telephone number is 489-4111 (Area Code 215)

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, 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.

CONTENTS

THIS IS URSINUS	5
The College in Brief	5
STUDENT LIFE ON CAMPUS	9
The Campus Setting	12
ADMISSION	17
FINANCIAL INFORMATION	27
Tuition, Board, Fees	27
Scholarships and Financial Aid	30
EDUCATIONAL PROGRAM	34
THE URSINUS PLAN	41
COURSES OF INSTRUCTION	48
DEPARTMENTAL REQUIREMENTS	106
DIRECTORY	116
The Board of Directors	116
The Administration	119
The Faculty	120
Resident Heads	129
Prizes, Honors, Degrees, 1970	130
Alumni Association	136
College Calendar for 1972-1973	137
INDEX	139



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 104 years. It has more than eleven hundred students, sixty per cent of whom are men. About nine hundred students are residents in College dormitories. The others live at home and commute from surrounding areas.

Majors are offered in fourteen 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.

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 115 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 out of 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.

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,

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 on account 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.

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.

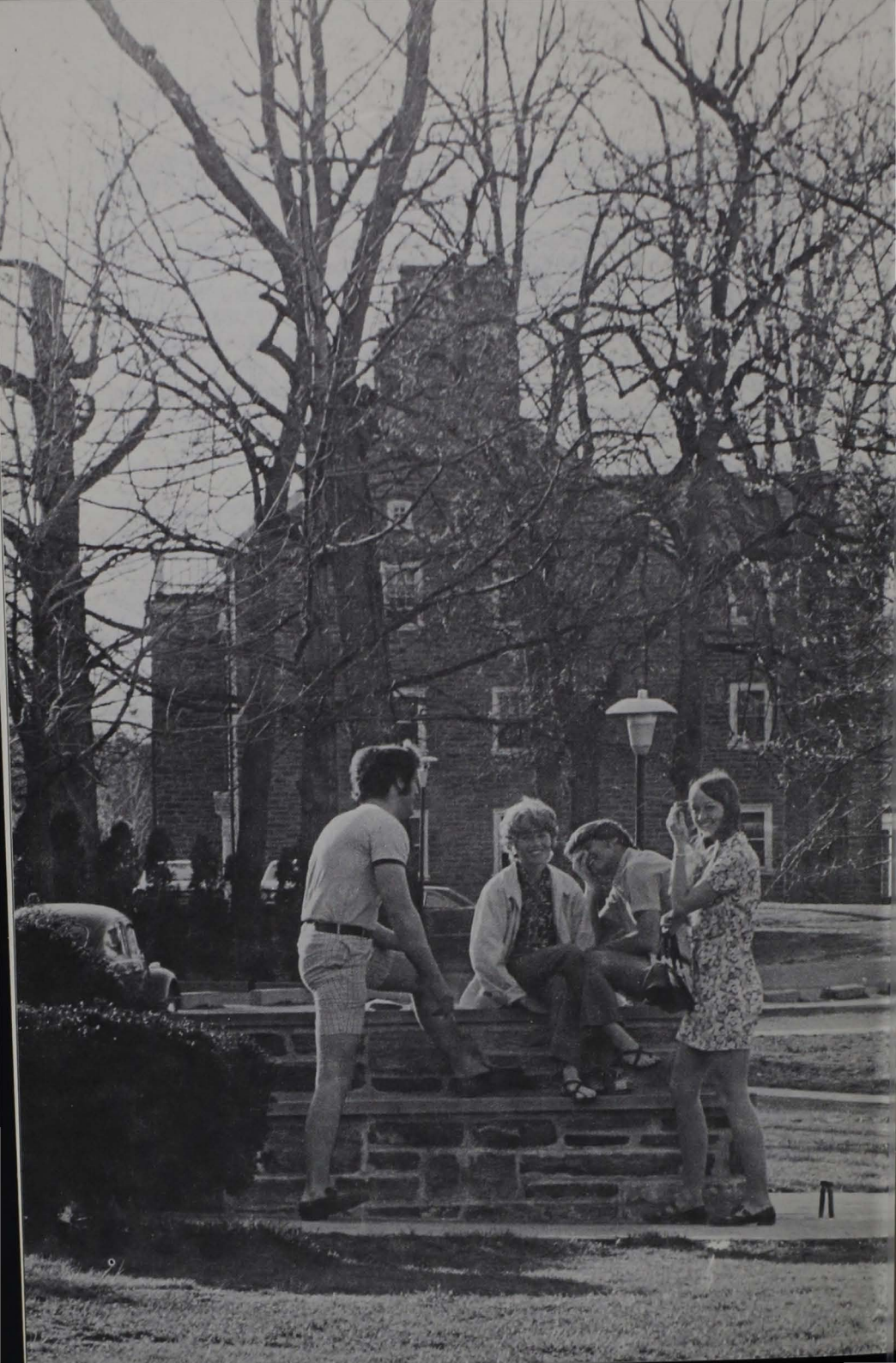
Ursinus is located in the heart of a region which is rich in historical tradition. In Colonial days this region was the center of the cultural and political development of America.

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. During the 1972-1973 academic year, work was in progress on the restoration of Bomberger Hall and on the conversion of the old library into a College Union.



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. Conversion of the old library into a College Union will further enrich student life on campus.

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 (38" x 45"), 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 Chaplain of the College.

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, wrestling, cross country, golf, baseball, track and tennis. In addition to this intercollegiate program, intramural games are played. Intramural athletics for men include touch football, basketball, volleyball, wrestling, a free-throw contest, softball, track, tennis, and interfraternity competition.

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), and badminton (varsity and junior varsity). The intramural program provides recreational opportunities in hockey, basketball, tennis, softball, and inter-dorm competition in volleyball and table tennis.

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.

Among the most active organizations is the Young Men's and Young Women's Christian Association. Numerous religious and social activities are planned and sponsored by this group in collaboration with other campus

groups. An active "Y" cabinet post for Christian outreach is the evangelical, interdenominational Ursinus Christian Fellowship. The Sunday Seminar, led by the College Chaplain, and the Chi Alpha Society offer additional religious perspectives 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, the Student National and Pennsylvania State Education Associations, 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 women 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 one-week tour each year; the Ursinus College Choir, which offers a wide variety of literature from popular to major work, 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 eleven 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.

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 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

Student life at Ursinus takes place in a setting where the new blends with the old, and the practical with the picturesque.

Wisner 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. Wisner, '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 is to re-open 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 Heiny 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 106,000 volumes, not counting government documents and pamphlets. The Library receives over 800 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 80,000 units.

The Administration Building 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 was recently installed around the field.

In the spring of 1973, the College Union is expected to open a new chapter in the social life of the campus. Designed as "the living room of the campus," the College Union is being placed in the old Alumni Memorial Library building, built in 1922. It is to include large social lounges, a recreational area in the basement, meeting rooms, a snack shop and offices for student groups.

Other structures on campus 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; Sprinkle 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.

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.

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 thirty-two women.

Duryea Hall, 612 Main Street, is a residence hall for fifteen women.

Clamer Hall, Main Street, the gift of Dr. Guillian 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, fifteen 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 ten 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 Dean of Admissions will request the applicant's school principal or headmaster to send an official transcript of the school record. At the same time, inquiry is made concerning the character of the candidate and his ability to do college work.

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 and the Scholastic Achievement 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 and three Achievement Tests of the College Entrance Examination Board. *Foreign students* must, in addition, take the TOEFL test. It is recommended that applicants take the November or December Scholastic Aptitude Tests and three Achievement Tests in December or January of the senior year. One of the achievement tests must be in English Composition, and one must be in the foreign language which the candidate is presenting for admission purposes. A third achievement test should be in mathematics or science for science majors and in history or social studies for non-science majors. 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 fifteen units which are to be distributed as follows:

BASIC ACADEMIC CREDITS (9 units)

English, *Four years, Earning Three 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 2½ Units)

Advanced Mathematics

Solid Geometry

Plane Trigonometry

Science

Social Studies

Foreign Language

ELECTIVES (Maximum 3½ 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 College will then write for the high school record, and the applicant should have junior year Scholastic Aptitude Test scores sent and arrange for an interview, preferably prior to October 1. The student should also take achievement tests of the College Board in the Spring or Summer before the beginning of the senior year. Early decisions will be made and students notified in the late summer and early fall.

ENGINEERING PROGRAM

Arrangements have been made with the Engineering Schools of the University of Pennsylvania and the University of Southern California to which a student may 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 *Departmental Requirements*.

The candidate for the Engineering program must present 3½ 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:

1. If a student has taken two or three years of a foreign language in high school and achieves a minimum College Board score of 450 in that language, he must enroll in the intermediate level of that language in college. If he scores below 450, he may take the intermediate course or he may elect the elementary course and take it without credit toward graduation.

If he is unable to master the work at the intermediate level, he may drop back to the elementary level, but he will receive no credit for graduation for successful work in the elementary course.

2. If a student has studied a language for two, three or four years in high school and achieves a minimum College Board score of 550 in the language, he must take an advanced language course beyond the intermediate level. If he is unable to do the work of the advanced language course, he may drop back to the intermediate level, in which case the successful completion of the intermediate course would fulfill the college language requirement and give credit toward graduation.
3. In the case of a late application or of the unavoidable absence of College Board Achievement test results, placement will be determined by the number of years a student studied a language in high school and by the number of years that may have elapsed since the student last studied a language in high school. In such a case, the language departments will give a proficiency test. The conditions stated in paragraph one governing credit toward graduation apply in these cases.

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, but no credit will 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 must receive written permission from the Dean of the College or the Dean of Admissions to take a course at another college.*

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 semester-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 7½ 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)

From any Institution of higher education, the applicants 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 Evening School.

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.

For information, catalog, and application forms, for both Summer and Evening Schools, address The Director, Evening School, Ursinus College, Colledgeville, 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. The Council on Dental Education of the American Dental Association fixes as the minimum basis for admission to an approved dental school the successful completion of two full years of academic work in an accredited college of liberal arts and science. This college work must include courses in English, biology, physics, inorganic and organic chemistry.

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. As a general rule 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. Programs for certification in the academic subjects of the secondary field are offered. The State of Pennsylvania certifies Social Studies teachers through a comprehensive Social Studies Program; certification in the separate social sciences has been discontinued in Pennsylvania. Available at Ursinus are concentrations in History, Government, Economics and Psychology. Advisers should be consulted in each of these areas. A program for physical education teachers covers certification for the teaching of health and physical education in both elementary and secondary schools. 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 seeking 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	\$2150
Room and Board	\$1100
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 Students

Advance Payment—July 15	\$ 100
-------------------------------	--------

All Students

September—One-half annual charges, less credit 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 Trust Bank of Philadelphia, and/or the Insured Tuition Payment Plan of Boston. These arrangements should be made early enough to assure payment of bills no later than the date indicated on the billing.

Checks should be made payable to URSINUS COLLEGE.

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 \$72.00 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 Part-Time 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 and is charged in September. This coverage may be waived by deducting amount from the bill when payment is made. The charge will be cancelled by the Treasurer's Office.

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.

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

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. A fee of \$25 per semester is charged to students majoring in Biology, Chemistry, Pre-engineering, Physics, and Freshmen who are enrolled in Undesignated Natural Science. A fee of \$25 is charged to students majoring in Psychology during their Sophomore, Junior, and Senior years.

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 when the absence is continuous over a period exceeding four weeks, in which case 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.

A woman student who marries must notify the College of her 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.

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 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 may be employed on a contractual basis, with credit for work performed applied directly to their account. Under special circumstances, a student may request permission to be paid on a 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

Federal Educational Opportunity Grants range from \$200 to \$1000 per academic year and are based upon extreme need as supported by the College Scholarship Service Parents' Confidential Statement.

STATE SCHOLARSHIPS

All students in need of financial assistance are urged to consult their guidance counselors for information about 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 \$1000 per year not to exceed \$5000 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 \$1000 to \$1500 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. 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, Classics, 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 as to his future plans, and therefore undecided as to 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 Admission and 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.

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

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. They must carry a minimum of fourteen (14) semester hours in each of the last two semesters.

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.

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%, 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 extra-curricular 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.

A permanent record is kept of each student's work, a copy of which is sent to his parent or guardian at the close of each term. The standing of first-year students is reported also at mid-term. 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.

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 may be required by the department chairman upon the student's return.

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.

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 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.

URSINUS COLLEGE BULLETIN

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.

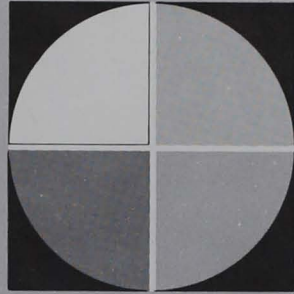
All foreign students who wish to apply to Ursinus College are required to take the Test of English as a Foreign Language (TOEFL). For information, write to TOEFL, Box 899, Princeton, New Jersey, USA, 08540.

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
Program of Liberal Education
in a World Setting
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*.

1. *Symposium*. Open to all Seniors. Students are enabled to integrate their particular departmental interests collectively in dealing with current issues.
2. *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

Program of Liberal Education." The College has always placed emphasis upon a broad liberal arts background, and the new 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 001, 002, and TWO FULL YEARS OF A FOREIGN LANGUAGE (to the 003, 004 level or one full year beyond 004). FOREIGN LANGUAGE choices include courses in Classical Languages, 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 001, 002; 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 001, 008; ECONOMICS 003, 004; POLITICAL SCIENCE 001, 002; SOCIOLOGY 001, 002; or an INTEGRATED SEQUENCE OF COURSES IN THE SOCIAL SCIENCES*.

SCIENCE AND MATHEMATICS DIVISION:

Science Majors are required to take the INTEGRATED PHYSICAL SCIENCE COURSE, CMP267-1, 2‡, *Mathematics Majors* may elect to take CMP267. *Non-Science Majors* (and *Mathematics Majors* who do not elect CMP267) are required to take one of the following full-year sequences of courses: BIOLOGY 001, 002; CHEMISTRY 001, 002; PHYSICS 001, 002; GEOLOGY 001, 002; or an INTEGRATED SCIENCE COURSE FOR NON-SCIENCE MAJORS*.

‡*The course is the result of one year of planning followed by a one-year pilot course and two years of an experiment during which the course was open to the full complement of students. Approval has been given by the Faculty for inclusion in the URSINUS PLAN. See description on page 103.*

RADIAL COURSES IN NON-MAJOR 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 Languages
Dramatic Arts*
Germanic and Slavic Languages
Public Speaking
Romance Languages

Humanities Division:

English Literature
Fine Arts
Foreign Literature
History
Music
Philosophy-Religion

Social Science Division:

Anthropology
Economics
Education 2, 44
Geography
Political Science
Psychology
Sociology

Science and Mathematics Division:

Biology
Chemistry
Geology
Health & Phys. Ed. 32m 32w
Mathematics
Physics

Here and elsewhere courses marked () have been recommended by the Faculty of Ursinus College, but may not be offered in 1973-1974.

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 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 three-hour 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-

mentation from his adviser, in the Office of the Dean by May 1 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:

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

Social Science Division:

Economics Club
International Relations Club
Intercollegiate Conference on
Government
Psychology Club
Pennsylvania State Education
Association
Ursinus Student Government
Association

Science and Mathematics Division:

Beardwood Chemical Society
Brownback-Anders Pre-Medical
Society
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

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

MR. N. MILLER

003—001 *INTRODUCTION TO ANTHROPOLOGY* MR. MILLER
Archaeology, physical anthropology, and the nature of culture. Three hours per week. *Three semester hours.*

003—002 *INTRODUCTION TO ANTHROPOLOGY* MR. MILLER
Continuation of course 001. Three hours per week. *Three semester hours.*

005—BIOLOGY

ASSISTANT PROFESSOR ALLEN

ASSOCIATE PROFESSOR HOWARD

ASSOCIATE PROFESSOR KRUSE

ASSISTANT PROFESSOR SMALL

MRS. SHINEHOUSE

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 human, veterinary 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 in Biology, including Biology 011, 012; 014; 019; 021 and 031. Additional electives are to be selected from Biology 015; 016; 017, 018; 020; 022; 023, 024; 025; 026; 032; 133, 134; 233, 234; 333, 334. CMP 267—001, 002 is required as a pivotal course for all science majors. This department also requires its majors who are not in the Teaching Program (see below) to take Chemistry 007, 008. Those planning to pursue graduate studies in Biology are advised to elect Mathematics 031 and/or Mathematics 013, 014 and/or Mathematics 041.

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: CMP 267—001, 002. Biology 011, 012; 015; 017, 018; 021; 022; 014 or 019.

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.

NOTE: Students who complete the integrated course in General Chemistry, General Physics, and Mathematics (CMP 267—001, 002) will satisfy the requirements for the following combination of courses: Physics 001, 002; Mathematics 029, 030; and 8 semester hours of General College Chemistry.

005—001 GENERAL BIOLOGY (ZOOLOGY)

DR. HOWARD

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—002 GENERAL BIOLOGY (BOTANY)

DR. HOWARD

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—001 and 005—002 of General Biology are not open to Biology majors but may be taken by other students to satisfy the college requirements for graduation.

005—011 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, CMP 267—001, 002. Two hours of lecture; two two-hour laboratory periods per week. *Four semester hours.*

005—012 GENERAL BIOLOGY

DR. ALLEN

A continuation of Biology 011. General topics include the physiology, ecology and evolution of living organisms. Prerequisite, Biology 011. Two hours of lecture; two two-hour laboratory periods per week. *Four semester hours.*

Courses 005—011 and 005—012 are the basic introductory courses prescribed for all Biology majors and for any others who are planning to meet the various pre-professional requirements in Biology.

005—014 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 012. One hour of lecture; two three-hour laboratory periods per week. *Four semester hours.*

005—015 *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 002 or Biology 012. Two hours of lecture, one three-hour laboratory period per week. *Three semester hours.*

NOTE: Students who register for Biology 015 must keep Saturdays free for all-day field trips.

005—016 *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 002 or 012. Two hours of lecture, one three-hour laboratory period per week. *Three semester hours.*

Biology 005—016 is required for those who intend to apply for certification in Pennsylvania as teachers of Comprehensive Science and is strongly urged for students in a preveterinary program.

005—017 *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 001 or Biology 011; or permission of the instructor. Two hours of lecture; one two-hour laboratory period per week. *Three semester hours.*

005—018 *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 017; or permission of the instructor. Two hours of lecture; one two-hour laboratory period per week. *Three semester hours.*

005—019 *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 012. One hour of lecture; two three-hour laboratory periods per week. *Four semester hours.*

005—020 *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 012; or permission of the instructor. One hour of lecture; two three-hour laboratory periods per week. *Four semester hours.*

005—021 *GENETICS*

DR. SMALL

A survey of the basic principles of classical, biochemical and population genetics. Prerequisites, Biology 001, 002 or Biology 011, 012. Three hours per week. *Three semester hours.*

COURSES OF INSTRUCTION

005—022 *EVOLUTION*

DR. SMALL

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—023 *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 014 or 019, Biology 021; Chemistry 008; or permission of the instructor. One hour per week. *One semester hour.*

005—024 *SEMINAR*

STAFF

Comparable to Biology 023, but using different material. Prerequisites, Senior standing; Biology 014 or 019, Biology 021; Chemistry 008; or permission of the instructor. One hour per week. *One semester hour.*

005—025 *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 012; Chemistry 008. Two hours of lecture; one four-hour laboratory period per week. *Four semester hours.*

NOTE: Effective Fall, 1974, the prerequisites for Biology 025 will be Biology 012, Chemistry 008, Chemistry 009 or 016.

005—026 *VERTEBRATE PHYSIOLOGY*

DR. KRUSE

A study of the general principles of the functional mechanisms that underlie the life processes of vertebrates. Prerequisites, Biology 012; Chemistry 008. Two hours of lecture; one four-hour laboratory period per week. *Four semester hours.*

Enrollment in Biology 025 is limited to 16 students and in Biology 026 to 20 students each term. A minimum of 6 students is required for each course to be offered.

005—031 *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 012; or permission of the instructor. Two hours of lecture; two hours of laboratory per week. *Three semester hours.*

005—032 *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 008. Two hours of lecture; two hours of laboratory per week. *Three semester hours.*

005—133 *RESEARCH*

STAFF

Scientific literature research with the preparation of a final report concerning some biological phenomenon of interest to the student. Prerequisites, Biology 012 and consent of a staff member to serve as advisor. *One semester hour.*

URSINUS COLLEGE BULLETIN

005—134 RESEARCH STAFF
Content and prerequisites as in Biology 133, but offered in the spring term. *One semester hour.*

005—233 RESEARCH STAFF
Scientific literature research with the preparation of a final report including an original analysis or project design. Prerequisites, Biology 012 and consent of a staff member to serve as advisor. *Two semester hours.*

005—234 RESEARCH STAFF
Content and prerequisites as in Biology 233, but offered in the spring term. *Two semester hours.*

005—333 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 012 and consent of a staff member to serve as advisor. *Three semester hours.*

005—334 RESEARCH STAFF
Content and prerequisites as in Biology 333, 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 133 or 134 with Biology 333 or 334 must obtain special permission from the Chairman of the Department.

010—CHEMISTRY

PROFESSOR STAIGER	ASSISTANT PROFESSOR HESS
ASSOCIATE PROFESSOR SCHULTZ	MRS. BICKING
ASSOCIATE PROFESSOR KRUSE	VISITING PROFESSOR LEVESQUE
ASSISTANT PROFESSOR BARTH	

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

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: CMP267—001, 002; Chemistry 003, 004, 006, 007, 008, 009, 010, 011; Mathematics 031, 032; Physics 004 or Biology 001, 002. The following are recommended as electives: Chemistry 005, 012, 021, 030; Physics 007, 008; German 003, 004, 011, 012.

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 I.

The following courses are prescribed: CMP 267-001, 002; Chemistry 003, 007, 008, 009, 010; Biology 011, 012; Mathematics 031. The following are recommended as electives: Chemistry 005, 006, 021, 032.

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: CMP267—001, 002; Chemistry 003, 007, 008. Chemistry electives 6 credits: Biology 001, 002; Physics 011, 012; 004. *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.*

NOTE: Students who complete the integrated course in General Chemistry, General Physics and Mathematics (CMP267-001, 002) will satisfy the requirements for the following combination of courses: Physics 001, 002; Mathematics 029, 030; and 8 semester hours of General College Chemistry.

010—001. 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 001 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—002. GENERAL CHEMISTRY—A terminal course

DR. LEVESQUE

A continuation of Chemistry 001. Prerequisite, Chemistry 001. 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 002 does not satisfy

the prerequisite for advanced chemistry courses. Two hours of lecture and three hours of laboratory per week. *Three semester hours.*

010—003. *QUANTITATIVE ANALYSIS* MISS BARTH

A study of commonly used methods of gravimetric and volumetric analysis. Emphasis is placed on the theory of equilibrium developed in CMP267-001, 002. Three hours lecture and three hours of laboratory per week. *Four semester hours.*

010—004. *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 009. *Four semester hours.*

010—005. *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 003 and 010. Two hours of lecture and three hours of laboratory per week. *Three semester hours.*

010—006. *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 003 and 009. Two hours of lecture and three hours of laboratory per week. *Three semester hours.*

010—007. *ORGANIC CHEMISTRY* DR. HESS

The study of the properties, synthesis, and the structure of the most important classes of the carbon compounds. Prerequisites, CMP267-001, 002 or equivalent. Three hours of lecture and three hours of laboratory per week. *Four semester hours.*

010—008. *ORGANIC CHEMISTRY* DR. HESS

A continuation of Chemistry 007. Prerequisite, Chemistry 007. Three hours of lecture and three hours of laboratory per week. *Four semester hours.*

010—009. *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, CMP267-002 or equivalent, Chemistry 003, and Mathematics 031. Mathematics 032 is recommended. Three hours of lecture and three hours of laboratory work per week. *Four semester hours.*

010—010. *PHYSICAL CHEMISTRY* DR. SCHULTZ

A continuation of Chemistry 009. Prerequisite, Chemistry 009. Three hours of lecture and three hours of laboratory work per week. *Four semester hours.*

COURSES OF INSTRUCTION

010—011. *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 008. *Four semester hours.*

010—012. *ADVANCED ORGANIC CHEMISTRY*

DR. HESS

A study of the structures of organic molecules and their relation to the mechanism of organic reactions. Prerequisite, Chemistry 010 and 011. Three hours of lecture per week. *Three semester hours.*

010—013. *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. Prerequisites, Chemistry 008 and 010. Two hours of lecture and three hours of laboratory per week. *Three semester hours.*

010—016. *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 008, Biology 012. Three hours of lecture and three hours of laboratory per week. *Four semester hours.*

010—021. *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. Prerequisites, Chemistry 008, German 002. One hour per week. *One semester hour.*

010—022. *SEMINAR*

STAFF

One hour per week. Prerequisite, Chemistry 008. *One semester hour.*

010—023. *SEMINAR*

STAFF

One hour per week. Prerequisite, Chemistry 008. *One semester hour.*

010—030. *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.*

010—032. *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 007, 008. Two hours of lecture per week, two hours of laboratory. *Three semester hours.*

CLASSICAL LANGUAGES

ASSISTANT PROFESSOR WICKERSHAM

The chief objective of the Classics Department is to develop in the student accuracy in thought and verbal expression. Other objectives are to enlarge the student's perspective by introducing him to a civilization other than his own; to increase his knowledge and understanding of the literature and institutions of England and America by studying the Greek and Roman sources from which they came; to encourage in the student a mastery of two languages which are important tools in many fields.

Students majoring in Classical Languages are required to take at least 12 semester hours of Greek and 12 semester hours of Latin beyond Latin 002. In the first half of his senior year, each student must take the Seminar in Classical Studies, Greek 007. In the examination at the close of this course, he will be expected to show a satisfactory general knowledge of Greek and Roman literature, language, art, history, geography, mythology, religion, and private life. For this examination the student is expected to prepare himself (with the advice and help of the instructor) throughout his previous three years both by courses and by outside reading.

016—Greek

016—001. *BEGINNING GREEK* STAFF

Greek 001 may be elected by students in any major field.
Three hours per week. *Three semester hours.*

016—002. *INTERMEDIATE GREEK* STAFF

Prerequisite, Greek 001 or its equivalent.
Three hours per week. *Three semester hours.*

016—003, 004, 005, 006. *ADVANCED GREEK* STAFF

Readings from Homer, Thucydides, Aristophanes, and other authors depending on the preferences and capacities of those electing the course. Only one of these courses will be given in any one semester. *Three semester hours.*

016—007. *SEMINAR IN CLASSICAL STUDIES* STAFF

A study of selected topics dealing with the Greco-Roman world. Knowledge of Greek and Latin is a prerequisite. Three hours per week. *Three semester hours.*

016—008. *NEW TESTAMENT GREEK* STAFF

Prerequisite, Greek 002.
Three hours per week. *Three semester hours.*

017—Latin

017—001. *ELEMENTARY LATIN* STAFF

A study of the grammar, syntax, and vocabulary, with emphasis upon the Latin elements in English words. Reading of passages from various authors. Three hours per week. *Three semester hours.*

017—002. *ELEMENTARY LATIN* continued STAFF
Three semester hours.

017—033, 004. *OVID, VIRGIL* STAFF
 Prerequisite, Latin 002 or its equivalent.
 Each *three semester hours.*

017—005, 006, 007, 008, 009, 010, 011, 012. *ADVANCED LATIN* STAFF
 The instructor will arrange with students electing these courses to read authors of one period or literary type, or authors whose works may be correlated with other fields of study, e.g., philosophy, history, law. Not more than two of these courses will be given in any one semester. Prerequisite, Latin 004 or its equivalent. Each of them carries *three semester hours* credit.

018—DRAFTING AND DESCRIPTIVE GEOMETRY

PROFESSOR MARSTELLER

018—001. *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, working drawings, shop processes, reproduction methods, graphs. Six hours laboratory per week. *Three semester hours.*

018—002. *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 001. Six hours laboratory per week. *Three semester hours.*

020—ECONOMICS

PROFESSOR HUNTER

ASSISTANT PROFESSOR PETRAKIS

ASSOCIATE PROFESSOR SYMONS

MR. McCARTHY

ASSISTANT PROFESSOR MEYER

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 003, 004, 026, 027, and at least one seminar in Economics. In addition, they must take Mathematics 001, 002, 013, 014; and

one pivotal series other than Economics 003, 004 from the Social Science Division. Mathematics 001, 002 may be waived upon the basis of adequate previous preparation.

020—003. *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—004. *ECONOMIC PRINCIPLES* STAFF
Price theory, income distribution, international trade, and current economic problems. Prerequisite, Economics 003. Three hours per week. *Three semester hours.*

**020—006. *CORPORATION FINANCE* DR. PETRAKIS
Basic principles underlying the financing of the corporate structure. Short and long-term financing instruments. Expansion, failure, and reorganization of the corporation. Prerequisite, Economics 003. Three hours per week. *Three semester hours.*

020—007. *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—008. *INTERNATIONAL ECONOMICS* MR. SYMONS
International trade theory involving classical and neoclassical concepts. Present institutional arrangements. Foreign exchange rates, balance of payments, tariffs. Prerequisite, Economics 003, 004. Three hours per week. *Three semester hours.*

020—011. *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. A business simulation is used. Three hours per week. *Three semester hours.*

020—012. *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. A business simulation is used. Prerequisite, Economics 011. Three hours per week. *Three semester hours.*

020—013. *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 assign-

**This course is not offered in 1973-1974.

***This course is not offered in 1975-1976.

ments in solving income tax problems. Prerequisite, Economics 003, 004. Three hours per week. *Three semester hours.*

020—015. *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.*

020—016. *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 003, 004. Three hours per week. *Three semester hours.*

**020—017. *GOVERNMENT AND BUSINESS*

DR. HUNTER

Public policy toward business in the United States. Economic and legal aspects of regulation. Anti-trust and public utility regulation emphasized. Prerequisites, Economics 003, 004. Three hours per week. *Three semester hours.*

020—018. *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—021. *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—026. *MICRO-ECONOMICS*

DR. HUNTER

Advanced study of price theory and income distribution. Prerequisite, Economics 003, 004. Three hours per week. *Three semester hours.*

020—027. *MACRO-ECONOMICS*

DR. HUNTER

Measurement of economic fluctuations, their causes, governmental policies of stabilization and growth, and forecasting. Prerequisite, Economics 003, 004. Three hours per week. *Three semester hours.*

020—028. *COMPARATIVE ECONOMIC SYSTEMS*

MR. MEYER

Analysis of National economic systems in theory and practice. The development of economic policy and of problems are discussed and compared. Two year cycle of topics; each topic may be elected for credit. Prerequisite, Economics 003, 004.

*020—028a. *ECONOMIC SYSTEMS IN DEVELOPED COUNTRIES*

Three hours per week. *Three semester hours.*

**This course is not offered in 1973-1974; offered in 1974-1975.*

***This course is offered in 1973-1974; not offered in 1974-1975.*

**020—028b. *ECONOMIC SYSTEMS IN UNDERDEVELOPED COUNTRIES*
Three hours per week. *Three semester hours.*

020—034. *ECONOMIC DEVELOPMENT* STAFF
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 003, 004.

*020—034a. *PROCESS AND PROBLEMS OF DEVELOPMENT IN THE MODERN WORLD*
Three hours per week. *Three semester hours.*

**020—034b. *PROCESS AND PROBLEMS OF ECONOMIC DEVELOPMENT IN EUROPE AND THE U.S.*
Three hours per week. *Three semester hours.*

020—035. *SEMINAR IN ECONOMETRICS* STAFF
Review of empirical work by contemporary economists in a quantitative mathematical setting. Construction of economic models. Development and presentation of research papers. Prerequisites: Mathematics 001, 002, 013, and 014. Three hours per week. *Three semester hours.*

020—036. *SEMINAR IN CURRENT ECONOMICS PROBLEMS* STAFF
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.*

**This course is not offered in 1973-1974; offered in 1974-1975.*

***This course is offered in 1973-1974; not offered in 1974-1975.*

025—Education

ASSOCIATE PROFESSOR COGGER	ASSOCIATE PROFESSOR LANDES
PROFESSOR FLETCHER	VISITING PROFESSOR LISSFELT
ASSISTANT PROFESSOR SHARP	VISITING PROFESSOR SELTZER
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.

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 departmental advisors 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 001 prior to taking courses in Education. As a prerequisite to student teaching, third-year students in areas other than Physical Education are required to observe classes in secondary schools for fifteen hours. For Physical Education majors at least seven hours of observation should be in elementary schools. The remainder of the fifteen hours of observation will be in the secondary schools. Information regarding this observation can be obtained in the office of the Department.

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 041, 043, 005, 044.

The following program of studies is required by all students seeking certification in secondary school teaching:

Second year, 2nd semester, Education 002; Third year, Education 021, 022; Fourth year, 1st semester, Education 041; Education 043; Education 005; Education 044.

Education 043 will be satisfied for students who major in Health and Physical Education upon the successful completion of Physical Education 055 and 056.

025—002. 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 a 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—005. STUDENT TEACHING AND PRACTICUM

DR. COGGER

MR. LANDES, MR. LISSFELT, MR. SELTZER

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 fourth-year 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 002, 031, 032, 041, 043. *Eight semester hours.*

075—009. *EDUCATIONAL AND PSYCHOLOGICAL 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. (The same course as 009 under Psychology.) Prerequisites, Psychology 001, 031, 032. Two hours of lecture. Two hours of laboratory. *Three semester hours.*

025—021. *EDUCATIONAL PSYCHOLOGY — LEARNING*

DR. FLETCHER, DR. SHARP, DR. FAGO

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 032 under Psychology.) Prerequisite, Psychology 001. Three hours per week. *Three semester hours.*

025—022. *EDUCATIONAL PSYCHOLOGY — GROWTH AND DEVELOPMENT*

DR. FLETCHER, DR. SHARP, DR. FAGO

The nature and development of the psychological processes from the prenatal period through adolescence. (The same course as 031 under Psychology.) Prerequisite, Psychology 001. Three hours per week. *Three semester hours.*

025—034. *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—041. *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—043. *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 Languages
- (E)—English
- (G)—Germanic and Slavic Languages
- (M)—Mathematics
- (R)—Romance Languages
- (S)—Science
- (X)—Social Science

Requisite, Education 041. One hour per week. *One semester hour.*

025—044. *FOUNDATIONS OF EDUCATION*

DR. COGGER, MR. SELTZER

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 a 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 DeCATUR

ASSISTANT PROFESSOR HENRY

ASSISTANT PROFESSOR RICHTER

ASSISTANT PROFESSOR WICKERSHAM

DR. WILSON

Majors must take at least thirty semester hours in English beyond Composition 001, 002. *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 001, 002; History 009, 010 or 011, 012; Literature 003, 004; and Literature 019, 020. 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 013. Students preparing to teach should take Literature 014.

Students will be guided in selecting courses that will help prepare them for the comprehensive examination as well as for their careers.

031—Composition031—001. *FIRST-YEAR COMPOSITION*

STAFF

The fundamental grammar of English; the study and writing of expository prose. Three hours per week. *Three semester hours.*

031—002. *FIRST-YEAR COMPOSITION*

STAFF

Continuation of Composition 001; training in the critical reading of prose and verse. Prerequisite, Composition 001. Three hours per week. *Three semester hours.*

031—005. *ADVANCED COMPOSITION*

MR. DOLMAN

Discussion of and practice in current types of *fictional* writing, with emphasis on the short story. Prerequisite, Composition 001, 002. Two hours per week. *Two semester hours.*

031—006. *ADVANCED COMPOSITION*

MR. DOLMAN

Discussion of and practice in *non-fictional* writing with an introduction to basic forms of journalism. Prerequisite, Composition 001, 002. Two hours per week. *Two semester hours.*

031—008. *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 001, 002. Individually scheduled. Two semester hours.

032—Literature

032—003. *SURVEY OF ENGLISH LITERATURE*

STAFF

The history of English Literature from the beginning to the end of the neoclassical era. Special attention is given to the social background. Three hours per week. *Three semester hours.*

032—004. *SURVEY OF ENGLISH LITERATURE*

STAFF

A continuation of course 003 to the present. Three hours per week. *Three semester hours.*

*032—005. *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 005 is elective for third-year and fourth-year students.

*032—006. *ENGLISH LITERATURE FROM 1740 TO 1795*

DR. STOREY

The literature of the neo-classical age and of pre-romanticism. Three hours per week. *Three semester hours.*
Literature 006 is elective for third-year and fourth-year students.

032-007. *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 007 is elective for third-year and fourth-year students.

032—008. *ENGLISH POETRY, 1824-1890*

MR. JONES

A study of the poetry of Tennyson and his contemporaries. Three hours per week. *Three semester hours.*
Literature 008 is elective for third-year and fourth-year students.

032—009. *SHAKESPEARE*

DR. DeCATUR

The reading of Shakespeare's principal plays and the study of their background. Three hours per week. *Three semester hours.*

032—010. *SHAKESPEARE*

DR. DeCATUR

Continuation of Literature 009. Literature 009 is not a prerequisite for Literature 010. Three hours per week. *Three semester hours.*
Literature 009 and 010 are elective for second-year, third-year and fourth-year students.

**This course is not offered in 1973-1974.*

032—013. *HISTORY OF THE ENGLISH LANGUAGE* DR. STOREY

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—014. *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.*

032-015. *TWENTIETH CENTURY POETRY* DR. WILSON

A study of modern poetry written before the second World War. Three hours per week. *Three semester hours.*

*032—016. *TWENTIETH CENTURY POETRY* DR. WILSON

A study of poetry written after the second World War. Three hours per week. *Three semester hours.*

Literature 015 alternates with Literature 016.

032—019. *AMERICAN LITERATURE* DR. YOST

A survey of American literature from its beginning to the Civil War. Three hours per week. *Three semester hours.*

032—020. *AMERICAN LITERATURE* DR. YOST

American literature from the Civil War to the present. Prerequisite, Literature 019. Three hours per week. *Three semester hours.*

Literature 019 and 020 are elective for second-year, third-year and fourth-year students.

032—021. *CLASSICS IN TRANSLATION* DR. WICKERSHAM

A study of Homer and Greek and Roman comedy. Two hours per week. *Two semester hours.*

032—024. *SEMINAR* DR. YOST

The reading and interpretation of English and American poetry. Prerequisite, Literature 003, 004. Three hours per week. *Three semester hours.*

Literature 024 is elective for fourth-year students. Enrollment is limited to twelve qualified students.

*032—027. *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. Three hours per week. *Three semester hours.*

**This course is not offered in 1973-1974.*

032—029. 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. Three hours per week. *Three semester hours.*

*032—030. 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 the Oxford humanists, Spenser, the metaphysical poets, and Milton. Prerequisite, Literature 003 or History 004. Three hours per week. *Three semester hours.*

Literature 030 alternates with Literature 031.

032—031. 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 003 and Literature 009 or 010. Three hours per week. *Three semester hours.*
Literature 031 alternates with Literature 030.

*032—032. MILTON

DR. STOREY

The reading of Milton's poetry and most important prose works and the study of their background. Prerequisite, Literature 003 or History 004. Three hours per week. *Three semester hours.*

032—033. 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 001. Three hours per week. *Three semester hours.*

032—034. THE NOVEL IN ENGLAND AND AMERICA SINCE THE
BEGINNING OF THE TWENTIETH CENTURY

DR. BOZORTH

A study of the development of the novel in England and America during the twentieth century. Prerequisite, English Composition 001. Three hours per week. *Three semester hours.*

Literature 033 and 034 need not be taken consecutively.

032—035. 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 001. Three hours per week. *Three semester hours.*

**This course is not offered in 1973-1974.*

COURSES OF INSTRUCTION

032—036. *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 001. Three hours per week. *Three semester hours.*

032—040. *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—041. *SEMINAR IN ADVANCED STUDIES IN LITERATURE* STAFF

A study of genre. Prerequisite, junior or senior standing. Three hours per week. *Three semester hours.*

*032—042. *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

DOUGLAS A. DAWSON

080—001. *APPRECIATION OF THE FINE ARTS* MR. DAWSON

An integrated study of the visual, audio and performing arts. Three hours per week. *Three semester hours.* Enrollment limited to 60.

080—002. *APPRECIATION OF THE FINE ARTS* MR. DAWSON

A continuation of Fine Arts 001. Prerequisite, Fine Arts 001. Three hours per week. *Three semester hours.* Enrollment limited to 60.

080—003. *PAINTING AND THE PLASTIC ARTS* MR. DAWSON

Theory of painting and the plastic arts. Three hours per week. *Three semester hours.* Enrollment limited to 18 per section.

080—004. *PAINTING AND THE PLASTIC ARTS* MR. DAWSON

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—002. *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.*

*This course is not offered in 1973-1974.

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—001. *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 works per week. *Three semester hours.*

033—002. *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.*

GERMANIC LANGUAGES

PROFESSOR HARTZELL

MR. GEIGER

PROFESSOR RICE

The Department of Germanic Languages strives to encourage the student to make active use of the languages studied, and the reading material is chosen with the principles of the College in mind.

035—German

Students majoring in German must take as many of the following courses as their schedules permit: German 005, 006, 007, 008, 009, 010; 013, 014 and 015, 016. Twelve (12) semester hours study in another language.

035—001. *ELEMENTARY GERMAN*

DR. RICE

Complete coverage of grammar and practice in using the language. Three hours per week. *Three semester hours.*

035—002. *ELEMENTARY GERMAN*

DR. RICE

Continuation of German 001. Should not be taken separately. Three hours per week. *Three semester hours.*

035—003. *INTERMEDIATE GERMAN*

DR. HARTZELL, MR. GEIGER

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—004. *INTERMEDIATE GERMAN*

DR. HARTZELL, MR. GEIGER

Continuation of German 003. 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—005. *ADVANCED GERMAN READING* DR. HARTZELL
Reading of material which will give background for the understanding of Goethe's *Faust*. Three hours per week. *Three semester hours.*

035—006. *GOETHE'S FAUST* DR. HARTZELL
A careful study of the text of Goethe's *Faust I* and parts of *Faust II* and the *Urfaust*. Three hours per week. *Three semester hours.*

*035—007. *SEMINAR IN LITERATURE OF THE EIGHTEENTH CENTURY* DR. HARTZELL
The works of Klopstock and Lessing and the music of the 18th Century are studied. Three hours per week. *Three semester hours.*

*035—008. *SEMINAR IN LITERATURE OF THE EIGHTEENTH CENTURY* DR. HARTZELL
The works of Goethe and Schiller are studied. Three hours per week. *Three semester hours.*

035—009. *SEMINAR IN LITERATURE OF THE NINETEENTH CENTURY* DR. HARTZELL
Authors studied include Kleist, Hebbel, Grillparzer and the music of the 19th Century. Three hours per week. *Three semester hours.*

035—010. *SEMINAR IN LITERATURE OF THE TWENTIETH CENTURY* DR. HARTZELL
A careful reading of representative works of the Twentieth Century, including those of Gerhart Hauptmann, Kafka, Wedekind, Brecht, Durrenmatt. Three hours per week. *Three semester hours.*

035—011. *SCIENTIFIC GERMAN* DR. RICE
Reading of texts in scientific fields. Special attention is given to techniques of translation. Prerequisite: German 004. Three hours per week. *Three semester hours.*

035—012. *SCIENTIFIC GERMAN* DR. RICE
Continuation of German 011. Readings in scientific journals, or original scientific works. Individual consultations. Three hours per week. *Three semester hours.*

035—013. *WRITING AND SPEAKING GERMAN* MR. GEIGER
Practice in oral elements of the language; written composition. Three hours per week, plus three periods per week of laboratory. *Three semester hours.*

*This course is not offered in 1973-1974.

URSINUS COLLEGE BULLETIN

035—014. *WRITING AND SPEAKING GERMAN* MR. GEIGER
Continuation of German 013. Increased emphasis upon speaking German. Three hours per week, plus three periods per week of laboratory. *Three semester hours.*

*035—015. *THE GERMAN NOVELLE* DR. HARTZELL
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—016. *CONTEMPORARY GERMANY, LIFE AND LITERATURE* DR. HARTZELL
A course designed to present a background of the social and literary life of contemporary Germany. This includes an exposure to the periodical literature and newspapers. Three hours per week. *Three semester hours.*

036—Swedish

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

036—001. *SWEDISH FOR BEGINNERS* DR. RICE
Grammar, easy reading and composition. Lectures on cultural background. Three hours per week. *Three semester hours.*

036—002. *INTERMEDIATE SWEDISH* DR. RICE
Reading and composition. Students completing this course will be able to read Danish and Norwegian as well as Swedish. Three hours per week. *Three semester hours.*

*036—003. *ADVANCED SWEDISH* DR. RICE
Readings in Swedish literature, including selections from Danish and Norwegian. Three hours per week. *Three semester hours.*

*036—004. *ADVANCED SWEDISH* DR. RICE
Continuation of Swedish 003. Three hours per week. *Three semester hours.*

GREEK

See under *Classical Languages*

040—HEALTH AND PHYSICAL EDUCATION

PROFESSOR BAILEY	ASSISTANT PROFESSOR BOYD
ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR FERRELL
GURZYNSKI	ASSISTANT PROFESSOR DAVIDSON
ASSISTANT PROFESSOR WHATLEY	MR. KOPP
	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

*This course is not offered in 1973-1974.

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 for use of all students in their leisure time.

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 objectives 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 031, 032 (m) or 032 (w), 043, 044, 051, 052, 054, 055, 056, 057, 058, 061, 062, 064; 301, 302, 303, 304, 305, 306, 307, 308; Biology 001, 002, 017, 018; Psychology 001, 008. Students preparing for teaching also must take prescribed education courses.

Required Activities Courses

MR. WHATLEY, MISS BOYD, MISS FERRELL,
MR. DAVIDSON, MR. KOPP, MRS. POLEY

040—101, 102. 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—031. *PRINCIPLES AND HISTORY OF PHYSICAL EDUCATION* MISS FERRELL

An orientation course designed to give the student an understanding of the meaning, 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—032m. *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—032w. *PERSONAL AND COMMUNITY HEALTH*

(Women students only)

MISS BOYD

Subject matter and presentation as for Physical Education 032m. Three hours per week. *Three semester hours.*

URSINUS COLLEGE BULLETIN

040—043. *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—044. *PROBLEMS AND MATERIALS OF HEALTH AND SAFETY EDUCATION IN SCHOOL PROGRAMS*

MISS BOYD

The scope, responsibility, 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—051. *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 physical education skills. Prerequisite, Biology 017, 018. Two hours per week. *Two semester hours.*

040—052. *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 017, 018. Two hours per week. *Two semester hours.*

040—054. *FIRST AID CARE AND PREVENTION OF ATHLETIC INJURIES*

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—055. *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—056. *PRINCIPLES AND METHODS OF TEACHING PHYSICAL EDUCATION*

MISS FERRELL

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.*

COURSES OF INSTRUCTION

040—057. *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—058. *PRINCIPLES AND METHODS OF COACHING AND OFFICIATING*

MISS BOYD, MR. WHATLEY, AND STAFF

Continuation of Physical Education 057. Two hours per week. *Two semester hours.*

040—061. *TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION* MISS FERRELL

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—062. *ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION*

MR. DAVIDSON

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

040—064. *CORRECTIVE AND ADAPTIVE PHYSICAL EDUCATION* MISS FERRELL

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—004. *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.*

Activities Courses

040—301, 302. *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, tennis, basketball, baseball, track and field, volleyball, marching tactics, tumbling, calisthenics, apparatus, square, folk and social dancing, swimming and body mechanics.

WOMEN: Hockey, soccer, speedball, lacrosse, tennis, volleyball, basketball, softball, track and field, marching tactics, tumbling, calisthenics, rhythmic, square, folk and social dancing, swimming and body mechanics.

040—303, 304. *SECOND YEAR ACTIVITIES*

STAFF

A continuation of H & PE 301 and 302 with some additional activities. More stress is placed on teaching and on the development of advanced skills and team strategies. Six hours per week. *Four semester hours.*

MEN: Football, soccer, speedball, tennis, volleyball, baseball, track and field, boxing, wrestling, marching tactics, tumbling, calisthenics, apparatus, tap dancing and swimming.

WOMEN: Hockey, soccer, speedball, lacrosse, tennis, volleyball, basketball, softball, track and field, archery, campcraft, low organized games, rhythmic, calisthenics, tumbling, apparatus, tap dancing and swimming. Consideration is given to the role of rhythmic activities in the program and to the selection and sources of dance materials.

040—305, 306. *THIRD YEAR ACTIVITIES*

STAFF

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. Opportunity is given in modern dance for original composition. Six hours per week. *Four semester hours.*

MEN: Archery, golf, tennis, lacrosse, badminton, boxing, wrestling, swimming and apparatus.

WOMEN: Archery, golf, tennis, lacrosse, badminton, swimming, modern dance and apparatus.

040—307, 308. *FOURTH YEAR ACTIVITIES*

STAFF

A continuation of Course 305 and 306 at a more advanced level. Bowling and life-saving and for women synchronized swimming are offered as additional activities. Three 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 032m or 032w, 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

PROFESSOR E. H. MILLER

PROFESSOR PARSONS

ASSOCIATE PROFESSOR VISSER

ASSISTANT PROFESSOR COPE

ASSISTANT PROFESSOR REED

MR. DAWSON

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 001, 002, students majoring in history must take Course 013, 014; six additional semester hours of European history; eleven semester hours in elective history courses, including one seminar; Economics 003, 004; Political Science 001, 002; Sociology 001; English Literature 003, 004 or 019, 020; and Psychology 001. 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 033—034 and to those other courses which include study of contributions of minority groups, specifically History 013—014; 007—008; 016; and the seminars devoted to African or American topics.

045—001. *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—002. *EUROPEAN CIVILIZATION* STAFF

Prerequisite, History 001. Continuation of Course 001. Two lectures and one section meeting per week. *Three semester hours.*

045—003. *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—004. *THE RENAISSANCE AND THE REFORMATION* DR. VISSER

A study of humanism and religion in the 15th and 16th centuries. This course not open to first-year students. Three hours per week. *Three semester hours.*

045—005. *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—006. *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—007. *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—008. *THE TWENTIETH CENTURY* DR. VISSER

A continuation of History 007 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.*

045—009. *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 011.)

045—010. *ENGLAND AND THE EMPIRE—COMMONWEALTH* DR. COPE

A continuation of History 009 with special attention to political and imperial developments since 1600. Three hours per week. *Three semester hours.* (Alternates with 012.)

*045—011. *BRITISH SOCIAL HISTORY* DR. COPE

A study of the daily life of the British people. Three hours per week. *Three semester hours.* (Alternates with 009.)

*045—012. *BRITISH SOCIAL HISTORY* DR. COPE

A continuation of Course 011. Three hours per week. *Three semester hours.* (Alternates with 010.)

045—013. *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—014. *THE UNITED STATES OF AMERICA* DR. PARSONS, DR. REED

A continuation of Course 013. Prescribed for all students majoring in history and for any others preparing to teach social studies. Three hours per week. *Three semester hours.*

045—015. *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.*

045—016. *ECONOMIC AND SOCIAL HISTORY OF THE UNITED STATES AND PENNSYLVANIA* DR. PARSONS

Economic foundations and social change in the United States with intensive study of Pennsylvania. Two-year cycle of topics. Students may elect each topic for separate credit. This course is not open to first-year students.

*045—016a. *COLONIAL AMERICA.* Three hours per week. *Three semester hours.*

*This course is not offered in 1973-1974.

COURSES OF INSTRUCTION

- *045—016b. *CIVIL WAR*. Three hours per week. *Three semester hours*.
- 045—016c. *WESTWARD MOVEMENT*. Three hours per week. *Three semester hours*.
- 045—016d. *TWENTIETH CENTURY AMERICA*. Three hours per week. *Three semester hours*. (Alternates with 023.)
- 045—017. *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 023.)
- 045—018. *LATIN AMERICA* DR. MILLER
 A continuation of History 017. Three hours per week. *Three semester hours*. (Alternates with 024.)
- *045—019. *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*.
- *045—020. *ANCIENT HISTORY* DR. VISSER
 A continuation of History 019 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—021. *MIDDLE EAST* MR. DAVIS
 A study of the Byzantine, Persian, and Moslem empires in the middle ages. Three hours per week. *Three semester hours*.
- *045—022. *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*.
- *045—023. *THE FAR EAST* DR. MILLER
 History of the Asiatic Mainland and the Pacific Islands. Three hours per week. *Three semester hours*. (Alternates with 017.)
- *045—024. *THE FAR EAST* DR. MILLER
 A continuation of History 023. Three hours per week. *Three semester hours*. (Alternates with 018.)
- 045—025. *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*.

*This course is not offered in 1973-1974.

- 045—026. *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—027. *HISTORY OF ART* MR. DAWSON
 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 001, 002 or Philosophy 101, 102. Three hours per week. *Three semester hours.*
- 045—028. *HISTORY OF ART* MR. DAWSON
 A continuation of History 027. Prerequisite, History 027. Three hours per week. *Three semester hours.*
 See also, Fine Arts.
- 045—029. *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 029 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—030. *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—031. *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—032. *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—033. *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—034. *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.*

050—MATHEMATICS

PROFESSOR DENNIS
PROFESSOR LEWIS

ASSOCIATE PROFESSOR SCHULTZ
ASSISTANT PROFESSOR BREMILLER

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.

NOTE: Students who complete the integrated course in General Chemistry, General Physics and Mathematics (CMP267-001, 002) will satisfy the requirement for the following combination of courses: Physics 001, 002; Mathematics 029, 030; and 8 semester hours of General College Chemistry.

A student majoring in Mathematics is required to take Physics 001, 002 and Mathematics 029, 030, 031, 033, and 034 and fifteen additional hours in Mathematics selected from the courses whose number are above 031.

Certain particular courses are recommended but not specifically required. For those preparing to be teachers — Mathematics 035, 036, 037, 038, 041, 042. For those preparing to take post-graduate work — Mathematics 032, 035, 036, 037, 038, 039, 040, 041, 042, 043, 044, 045.

For those preparing for engineering jobs in industry and for work in the computing field — Mathematics 032, 035, 036, 039, 040, 041, 042.

050—001. FUNDAMENTALS OF MODERN MATHEMATICS MR. BREMILLER

A treatment of the ideas that are especially pervasive in modern mathematics; sets, functions, operations, and relations; with emphasis on the logical structure of the number systems, algebra, and analytical geometry. Three hours per week. *Three semester hours.*

050—002. FUNDAMENTALS OF MODERN MATHEMATICS MR. BREMILLER

A further development of modern mathematics with a greater emphasis on analysis, and the mathematical disciplines as illustrated in the study of transcendental functions, probability, statistics, and the calculus. Three hours per week. *Three semester hours.*

050—013. STATISTICS DR. LEWIS

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—014. *STATISTICS* DR. LEWIS

Additional subjects covered are a continuation of Mathematics 013, correlation, analysis of variance, and methods of testing hypotheses. Prerequisite, Mathematics 013. Two hours per week. *Two semester hours.*

050—029. *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—030. *ANALYTIC GEOMETRY AND CALCULUS* DR. DENNIS

A continuation of Mathematics 029, with applications to the fields of chemistry and physics. Prerequisite, Mathematics 029. Three hours per week. *Three semester hours.*

050—031. *INTERMEDIATE CALCULUS* MR. BREMILLER

A continuation of Mathematics 030, 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 030. Three hours per week. *Three semester hours.*

050—032. *DIFFERENTIAL EQUATIONS* MR. BREMILLER

Solution of ordinary differential equations of first and second order, with applications to problems in the physical sciences. Laplace transforms; Fourier Series; power series solutions. Prerequisite, Mathematics 031. Three hours per week. *Three semester hours.*

050—033. *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—034. *LINEAR ALGEBRA* DR. DENNIS

A continuation of Mathematics 033 with emphasis on applications to Euclidean vector spaces of two and three dimensions. Prerequisite, Mathematics 033. Three hours per week. *Three semester hours.*

050—035. *MODERN ALGEBRA* DR. DENNIS

An introduction to the modern mathematical systems of groups, integral domains, rings, and ideals, fields, and vector spaces. Prerequisite, Mathematics 034. Three hours per week. *Three semester hours.*

050—036. *MODERN ALGEBRA* DR. DENNIS

A continuation of Mathematics 035, with extensions to linear groups, algebraic number fields, algebra of classes, Galois theory of equations. Prerequisite, Mathematics 035. Three hours per week. *Three semester hours.*

050—037. *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.

COURSES OF INSTRUCTION

050—038. *FUNDAMENTALS OF GEOMETRY* 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—039. *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 031. Three hours per week. *Three semester hours*.

050—040. *ADVANCED CALCULUS* MISS SCHULTZ

A continuation of Mathematics 039, with an introduction to Gamma and Bessel functions. Fourier series, Laplace transforms, and applications to the solutions of differential equations. Prerequisite, Mathematics 039. Three hours per week. *Three semester hours*.

050—041. *PROBABILITY* DR. LEWIS

An introduction to probability theory; a study of discrete and continuous probability functions. Prerequisite, Mathematics 002 or 029. Three hours per week. *Three semester hours*.

050—042. *MATHEMATICAL STATISTICS* MISS SCHULTZ

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 031 and 041. Three hours per week. *Three semester hours*.

050—043. *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 039, or simultaneously with Mathematics 039.

*050—044. *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*.

*050—045. *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 039, or simultaneously with Mathematics 039. Three hours per week. *Three semester hours*.

*This course is not offered in 1973-1974.

050—051. 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—052. 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.

055—MUSIC

MR. HOWLETT

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. THEORY OF MUSIC

055—001. 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*.

055—002. ELEMENTARY HARMONY

MR. HOWLETT

A continuation of Music 001. Prerequisite, Music 001. Two hours per week. *Two semester hours*.

B. APPRECIATION OF MUSIC

055—003. THE ART OF LISTENING

MR. HOWLETT

Learning to listen intelligently to great music through awareness of fundamental musical elements, rhythm, melody and harmony, and their incorporation through form and structure into musical composition. Two hours per week. *Two semester hours*.

055—004. 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 003 or by permission. Two hours per week. *Two semester hours*.

C. HISTORY OF MUSIC

*055—005. *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 003 or by permission. Two hours per week. *Two semester hours.*

*055—006. *MUSIC SINCE 1700* MR. HOWLETT

An examination of great music and musicians from J. S. Bach to the Twentieth Century. Prerequisite: Music 003 or by permission. Two hours per week. *Two semester hours.*

055—007. *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 dominance through the *avant-garde*, electronic, folk, jazz, and rock music. Prerequisite: Music 003 or by permission. Two hours per week. *Two semester hours.*

055—108. *SEMINAR: HISTORY* MR. HOWLETT

A study of Bach and Handel. Prerequisite: Music 003 or by permission. Two hours per week. *Two semester hours.*

*055—110. *SEMINAR: HISTORY* MR. HOWLETT

A study of Beethoven and Wagner. Prerequisite: Music 003 or by permission. Two hours per week. *Two semester hours.*

055—017. *SYMPHONIC LITERATURE* MR. HOWLETT

The evolution of the symphony orchestra and its music. Prerequisite: Music 003 or by permission. Two hours per week. *Two semester hours.*

055—018. *OPERA* MR. HOWLETT

A study of operatic masterpieces. Prerequisite: Music 003 or by permission. Two hours per week. *Two semester hours.*

D. MUSICAL ORGANIZATION

055-021a, 022a. *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 021b, 022b.*

055—021b, 022b, 021c, 022c, 021d, 022d. *URSINUS COLLEGE 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.**

**This course is not offered in 1973-1974.*

URSINUS COLLEGE BULLETIN

055—023a, 024a. *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 023c, 024c.*

055—023b, 024b, 023c, 024c, 023d, 024d. *URSINUS COLLEGE 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.

055—025a, 026a. *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 025c, 026c.*

055—025b, 026b, 025c, 026c, 026d. *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.**

055—027a, 028a. *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 027b, 028b.*

055—027b, 028b, 027c, 028c, 027d, 028d. *MEISTERSINGERS 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.

060—PHILOSOPHY AND RELIGION

PROFESSOR WILLIAMSON

ASSISTANT PROFESSOR HARDMAN

ASSOCIATE PROFESSOR CREAGER

MR. ZAKYDALSKY

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.

COURSES OF INSTRUCTION

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 109, 110 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 AND STAFF

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 AND STAFF

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. Three hours per week. *Three semester hours.*

060—104. *CONTEMPORARY PHILOSOPHY* MR. ZAKYDALSKY

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. Three hours per week. *Three semester hours.*

060—105. *INTRODUCTORY LOGIC* MR. ZAKYDALSKY

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. ZAKYDALSKY

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. Three hours per week. *Three semester hours.*

060—109. *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 109 is open only to majors in the field of Philosophy and Religion. Three hours per week. *Three semester hours.*

060—110. *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 110 is open only to majors in the field of Philosophy and Religion. Three hours per week. *Three semester hours.*

060—111. *ETHICS*

MR. ZAKYDALSKY

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. Three hours per week. *Three semester hours.*

060—112. *PHILOSOPHY OF SCIENCE*

MR. ZAKYDALSKY

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—113. *EPISTEMOLOGY*

MR. ZAKYDALSKY

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.*

COURSES OF INSTRUCTION

060—201. *HISTORY AND ANTHROPOLOGY OF RELIGION:
THE WESTERN SETTING* 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.*

060—001. *INTRODUCTION TO THE LITERATURE OF THE
BIBLE: OLD TESTAMENT* 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.*

060—002. *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—003. *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. Three hours per week. *Three semester hours.*

060—006. *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 008). Three hours per week. *Three semester hours.*

*060—008. *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 006). Three hours per week. *Three semester hours.*

*This course is not offered in 1973-1974.

*060—010. *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. Three hours per week. *Three semester hours.*

060—011. *SEMINAR IN RELIGION*

DR. HARDMAN, 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.*

*060—011A—(Topic for 1972-1973)

060—011B—Religion and Religious Language

060—012. *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—012A—(Topic for 1972-1973)

060—012B—Luther and Calvin

065—PHYSICS

PROFESSOR SNYDER

ASSOCIATE PROFESSOR MARSTELLER

ASSISTANT PROFESSOR TAKATS

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.

Students majoring in Physics must take the following courses: CMP 267-001, 002; Physics 003, 004, 007, 008, 007a, 008a; Mathematics 031, 032, 039, 040; either Mathematics 043, 045 or Physics 015, 016; 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 CMP 267-001, 002 (or equivalent); Physics 003, 004, 007, 008, 011, 012; Mathematics 031, 032.

NOTE: Students who complete the integrated course in General Chemistry, General Physics and Mathematics (CMP267-001, 002) will satisfy the requirement for the following combination of courses: Physics 001, 002; Mathematics 029, 030; and 8 semester hours of General College Chemistry. See p. 119.

**This course is not offered in 1973-1974.*

COURSES OF INSTRUCTION

065—001. *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 in itself of general scientific method. Prerequisite, Mathematics 001, 002, or high-school trigonometry and a satisfactory rating in the Mathematical Aptitude section of the CEEB test or in some test of a similar nature. Although not a requirement, Mathematics 029 and 030 are strongly urged, to be pursued concurrently if not already completed. Three hours lecture and three hours laboratory per week. *Four semester hours.*

065—002. *GENERAL PHYSICS* MR. MARSTELLER

Elementary sound, light, electricity and magnetism. Prerequisite, Physics 001. Three hours lecture and three hours laboratory per week. *Four semester hours. Admission to advanced courses depends upon the quality of work done in the elementary courses.*

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—003. *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 relativity. Prerequisites: Physics 001, 002, Mathematics 029, 030 or CMP 267-001, 002. Three hours lecture and three hours laboratory per week. *Four semester hours.*

065—004. *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 001, 002; Mathematics 029, 030 or CMP 267-001, 002. Three hours lecture and three hours laboratory per week. *Four semester hours.*

065—005. *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—007. *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. Prerequisite, CMP267—001, 002 or equivalent. Three hours per week. *Three semester hours.*

065—007a. *LABORATORY IN MODERN PHYSICS* DR. SNYDER

Laboratory work (optional) for Course 007. Three hours per week. *One semester hour.*

065—008. *MODERN PHYSICS* DR. TAKATS

A continuation of Course 007, with applications to properties of matter, nuclear physics, and elementary particle physics. Prerequisite, Physics 007. Three hours per week. *Three semester hours.*

065—008a. *LABORATORY IN MODERN PHYSICS* DR. SNYDER
Laboratory work (optional) for Course 008. Three hours per week. *One semester hour.*

065—010. *MECHANICS II* STAFF
Dynamics of a system of particles, mechanics of rigid bodies, general motion of a rigid body, Lagrange's equations, Hamilton's equations, theory of vibrations. Prerequisites: Physics 003, Mathematics 031, 032. Three hours per week. *Three semester hours.*

065—011. *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 001 and 002 or their equivalent and some knowledge of Physics. *Three semester hours.*

065—012. *GENERAL ASTRONOMY* MR. MARSTELLER
Continuation of Course 011. 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 011. *Three semester hours.*

*065—014. *ALTERNATING CURRENTS* DR. SNYDER
Capacitive 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 004 and Mathematics 031. Three hours per week. *Three semester hours.*

065—015. *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 031, 032; Physics 001, 002 or CMP 267-001, 002. Three hours per week. *Three semester hours.*

065—016. *ELEMENTS OF MATHEMATICAL PHYSICS* DR. SNYDER
Continuation of Physics 015. Coordinate transformations tensors, series solutions of differential equations, Legendre polynomials, Bessel functions, orthogonal functions, integral transforms, partial differential equations. Prerequisite: Physics 015. Three hours per week. *Three semester hours.*

*This course is not offered in 1973-1974.

COURSES OF INSTRUCTION

065—017. *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—018. *SEMINAR* STAFF
 Continuation of Course 017. *Two semester hours.*

*065—031. *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 001, 002 or CMP267—001, 002, Mathematics 031, 032. Three hours per week. *Three semester hours.*

065—109. *RESEARCH* STAFF
 Investigations, of experimental or theoretical nature, pursued independently by the student. The preparation of a summarizing report is required. To register for this course a student must have the consent of a member of the physics staff to serve as his adviser. *One semester hour.*

065—110. *RESEARCH* STAFF
 Continuation of Course 065—109. *One semester hour.*

065—209—*RESEARCH* STAFF
 Same as Course 065—109, but more extensive in scope. *Two semester hours.*

065—210. *RESEARCH* STAFF
 Continuation of Course 065—209. *Two semester hours.*

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—012. Three hours per week. *Three semester hours.*

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.*

*This course is not offered in 1973-1974.

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 001, 002, students majoring in Political Science must take courses 005, 006, and 015, 016; seven semester hours in elective Political Science courses; History 001, 002; History 013, 014; Economics 003, 004; Psychology 001 and Sociology 001, 002.

070—001. *AMERICAN GOVERNMENT* MR. KANE, DR. PANCOAST, DR. ZUCKER
An analysis of the structure and functions of American national and state governments. Three hours per week. *Three semester hours.*

070—002. *AMERICAN GOVERNMENT* MR. KANE, DR. PANCOAST, DR. ZUCKER
Continuation of Course 001. Three hours per week. *Three semester hours.*

070—003. *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—004. *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—005. *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—006. *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.*

COURSES OF INSTRUCTION

- 070—007. *POLITICAL THEORY* DR. ZUCKER
 Significant political ideals, forces and concepts from Plato to the present. Three hours per week. *Three semester hours.*
- 070—008. *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—009. *PUBLIC ADMINISTRATION* DR. PANCOAST
 A survey of the field of public administration, emphasizing administrative organization, fiscal management and personnel management. The administrative process is considered as a unit encompassing federal, state and local administration. Three hours per week. *Three semester hours.*
- 070—010. *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—011. *INTERNATIONAL RELATIONS* DR. CRAFT
 Basic theory, principles and functioning of the states in the world community. Three hours per week. *Three semester hours.*
- 070—012. *INTERNATIONAL RELATIONS* DR. CRAFT
 Continuation of Political Science 070—011. Three hours per week. Prerequisite, 011. *Three semester hours.*
- *070—013. *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—014. *SEMINAR IN INTERNATIONAL ORGANIZATION* DR. MILLER
 The structure and functions of international organizations. Two hours per week. *Two semester hours.*
- 070—015. *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—016. *METHODS OF POLITICAL ANALYSIS* DR. CRAFT
 A continuation of Course 015. Prerequisite, Political Science 015. Three hours per week. *Three semester hours.*

*This course is not offered in 1973-1974.

070—017. SEMINAR IN AMERICAN GOVERNMENT DR. PANCOAST

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—018. 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—019. 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 fourth-year students with permission of the instructor. Two hours per week. *Two semester hours.*

070—020. 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 fourth-year students with permission of the instructor. Two hours per week. *Two semester hours.*

075—PSYCHOLOGY

PROFESSOR FLETCHER

ASSISTANT PROFESSOR SHARP

ASSISTANT PROFESSOR FAGO

ASSISTANT PROFESSOR FRANCIS

The Department of Psychology is guided in its offerings and activities by two sets of objectives: (1) For the student majoring in areas other than Psychology, the introductory course, and Abnormal Psychology and Mental Hygiene, endeavor to show the growth of modern psychology and understanding of adjustments used in maintaining mental health; and (2) an attempt is made to present a composite view of the main phases of present-day psychology.

Students majoring in Psychology must take the following courses: Biology 001, 002, 021, 022; Mathematics 013, 014; Anthropology 001, 002; Sociology 001, 002; Psychology 001, 008, 009, 010, 024, 033, 034 or 035, 040, 044, and an additional elective course in Psychology.

Students who plan to continue the study of Psychology at the graduate level are strongly urged to include in their schedules Mathematics 029, 030; Biology 017, 018; Philosophy 003, 004 and Physics 001, 002.

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—001. *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 001 is a prerequisite for all other psychology courses. *Three semester hours.*

Psychology 001 must be taken by the first semester of the second year by all students preparing to become teachers.

075—008. *MENTAL HEALTH AND ABNORMAL PSYCHOLOGY*

DR. FLETCHER, DR. FRANCIS

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 001. Three hours per week. *Three semester hours.*

075—009. *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. Prerequisites, Psychology 001, 010. Two hours of lecture, two hours of laboratory per week. *Three semester hours.* (The same course as 009 under Education.)

075—010. *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 001, Biology 001 or 011, Mathematics 013, 014. Three hours lecture, two hours laboratory per week. *Four semester hours.*

075—011. *HISTORY AND THEORIES OF PSYCHOLOGY*

DR. SHARP

A study of the more important findings and theories contributing to the development of modern scientific psychology. Prerequisite, Psychology 001. Three hours per week. *Three semester hours.*

075—012. *PSYCHOLOGY IN INDUSTRY*

DR. FLETCHER

This course deals with the application of psychological techniques and principles to the problems of industry. Emphasis is given to individual differences, aptitudes and skills, job evaluation, merit rating, work methods, training programs, fatigue, accident control, safety education, incentives, employee attitudes, morale, the interview and related employment methods. Prerequisite, Psychology 001; Mathematics 013, 014. Three hours per week. *Three semester hours.*

URSINUS COLLEGE BULLETIN

075—023. *EDUCATIONAL PSYCHOLOGY — LEARNING*

DR. FLETCHER, DR. SHARP, DR. FAGO

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 023 under Education.) Prerequisite, Psychology 001. Three hours per week. *Three semester hours.*

075—024. *EDUCATIONAL PSYCHOLOGY — GROWTH AND DEVELOPMENT*

DR. FLETCHER, DR. SHARP, DR. FAGO

The nature and development of the psychological processes from the prenatal period through adolescence. (The same course as 024 under Education.) Prerequisite, Psychology 001. Three hours per week. *Three semester hours.*

075—033. *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 001 and 010. Three hours lecture, two hours laboratory per week. *Four semester hours.*

075—034. *SENSATION AND PERCEPTION*

DR. SHARP

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 001, Psychology 010. Three hours of lecture, two hours of laboratory per week. *Four semester hours.*

075—035. *PHYSIOLOGICAL PSYCHOLOGY*

DR. SHARP

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 001, 010; Biology 001, 011; or by permission of the instructor. Three hours per week. *Three semester hours.*

075—037. *PERSONALITY*

DR. FLETCHER

Theories about human nature and individuality; personality assessment and research methods; personality development and basic processes; and methods for personality change. Prerequisites, Psychology 001, 008, 022, and 033. Three hours per week. *Three semester hours.*

075—040. *SOCIAL PSYCHOLOGY*

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 social forces which affect individual judgment and action. Prerequisite, Psychology 001, 023 or 033. Three hours per week. *Three semester hours.*

075—042. 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—044. SEMINAR IN PSYCHOLOGY

DR. FLETCHER

A course designed to acquaint the student with current trends 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 only to fourth-year students majoring in psychology. Prerequisite, Psychology 001. One hour per week. *One semester hour.*

077—PUBLIC SPEAKING

DR. HENRY

077—001. PUBLIC SPEAKING

DR. HENRY

Composition and delivery of speeches designed to inform, persuade, stimulate, and entertain, with group analysis and criticism. Students will also be required to deliver impromptu speeches and participate in panel discussions on topics of current cultural and social interest. There will be some oral interpretation of plays and poems, as well as emphasis upon parliamentary procedure and practice. Two hours per week. *Two semester hours.*

077—002. PUBLIC SPEAKING

DR. HENRY

A continuation of Course 001 with the addition of game theatre and oral interpretation. Students will be asked to improvise dramatic situations and to interpret poems and scenes from plays. Prerequisite, Public Speaking 001. Two hours per week. *Two semester hours.*

077—003. DEBATING AND RESEARCH

STAFF

This course is organized for students who are interested in debating in intercollegiate tournaments. Open to third-year students who have completed Public Speaking 001 and 002, or who have, as members of the Debating Club, participated in twelve tournaments by the end of the Sophomore year. *One semester hour.*

077—004. DEBATING AND RESEARCH

STAFF

Continuation of Course 003. Prerequisite, Debating and Research 003. *One semester hour.*

077—005. DEBATING AND RESEARCH

STAFF

This course is an expansion of the elementary methods of argumentation. Open to senior students who have met the requirements of Debating and Research 003 and

004, and who have actively engaged in the summer program of formulating cases and organizing and accumulating rebuttal files. Prerequisite, Debating and Research 003 and 004. *One semester hour.*

007—006. *DEBATING AND RESEARCH*

STAFF

Continuation of Course 005. Prerequisite, Debating and Research 005. *One semester hour.*

ROMANCE LANGUAGES

ASSOCIATE PROFESSOR REINER

MR. RAPPOCCIO

ASSISTANT PROFESSOR PAUL

MR. ESPADAS

MRS. LUCAS

MRS. ALTMAN

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 004 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.

086—French

French majors must meet the following requirements:

French 005, 006, 015, 016; English Literature 003, 004; History 003, 004 or 005, 006. It is recommended that Latin 001, 002, 003, 004 (or equivalent, i.e., four years of Latin in secondary school) be taken.

Two of the following courses: French 021, 022, 023, 024.

Two of the following courses: French 011, 012, 013, 014.

To complete departmental requirements in their senior year, majors must pass a comprehensive examination in French.

086—001. *ELEMENTARY FRENCH*

DR. REINER

Three hours per week plus one hour of language laboratory per week. *Three semester hours.*

086—002. *ELEMENTARY FRENCH*

MRS. ALTMAN

Prerequisite: French 001. Three hours per week plus one hour of language laboratory per week. *Three semester hours.*

086—003. *INTERMEDIATE FRENCH*

STAFF

Prerequisite: French 002 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—004. *INTERMEDIATE FRENCH* STAFF
Prerequisite: French 003. Three hours per week plus one hour of language laboratory per week. *Three semester hours.*

086—005. *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—006. *FRENCH LITERATURE IN WORLD CIVILIZATION* MRS. LUCAS
A continuation of French 005; from 1789 to the present. Three hours per week. *Three semester hours.*

086—011. *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 005, 006 or equivalent. Three hours per week. *Three semester hours.*

086—012. *FRENCH POETRY OF THE NINETEENTH AND TWENTIETH CENTURIES* MRS. ALTMAN
Analysis and interpretation of poems of the Romantics, Baudelaire, Mallarmé, Rimbaud, Verlaine, Valéry, Péguy, and the moderns. Prerequisite: French 005, 006 or equivalent. Three hours per week. *Three semester hours.*

*086—013. *REPRESENTATIVE TWENTIETH CENTURY WRITERS* MRS. ALTMAN
Studies in major novelists and dramatists from Proust and Gide to Camus and Sartre. Prerequisite: French 005, 006 or equivalent. Three hours per week. *Three semester hours.*

*086—014. *FRANCE TODAY* MRS. LUCAS
Contemporary France as seen in its current literature, art, philosophy, and politics. Prerequisite: French 005, 006 or equivalent. Three hours per week. *Three semester hours.*

French 011 and 012 alternate with French 013 and 014.

086—015. *ADVANCED CONVERSATION AND COMPOSITION* MRS. LUCAS, MRS. ALTMAN
Three hours per week. *Three semester hours.*

086—016. *ADVANCED CONVERSATION AND COMPOSITION* DR. REINER, MRS. ALTMAN
Three hours per week. *Three semester hours.*

086—021. *MEDIEVAL FRENCH LITERATURE* MRS. ALTMAN
Three hours per week. *Three semester hours.*

*This course is not offered in 1973-1974.

URSINUS COLLEGE BULLETIN

086—022. *RABELAIS, THE PLEIADE, MONTAIGNE* DR. REINER
Three hours per week. *Three semester hours.*

*086—023. *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—024. *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 021 and 022 alternate with French 023 and 024.

086—152. *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.*

088—Spanish

Spanish majors must meet the following requirements:

Six hours of advanced Spanish composition and conversation and fourteen 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 eleven hours of literature). English Literature 003, 004; History 001, 002; 005, 006 or 017, 018, or 027, 028. To complete departmental requirements in their senior year, majors must pass a comprehensive examination in Spanish.

088—001. *ELEMENTARY SPANISH* MR. PAUL, MR. RAPPOCCIO
Three hours per week. *Three semester hours*

088—002. *ELEMENTARY SPANISH* MR. PAUL, MR. RAPPOCCIO
Prerequisite, Spanish 001. Three hours per week. *Three semester hours.*

088—003. *INTERMEDIATE SPANISH* STAFF
Prerequisite, Spanish 002 or equivalent (i.e., satisfactory completion of two years of Spanish in secondary school). Three hours per week. *Three semester hours.*

088—004. *INTERMEDIATE SPANISH* STAFF
Prerequisite, Spanish 003. Three hours per week. *Three semester hours.*

*This course is not offered in 1973-1974.

COURSES OF INSTRUCTION

*088—009. SPANISH-AMERICAN LITERATURE TO
THE TWENTIETH CENTURY MR. RAPPOCCIO

Prerequisite, Spanish 014 or by permission. Three hours per week. *Three semester hours.*

*088—010. SPANISH-AMERICAN LITERATURE OF
THE TWENTIETH CENTURY MR. RAPPOCCIO

Prerequisite, Spanish 014 or permission of the instructor. Three hours per week. *Three semester hours.*

Spanish 009 and 010 alternate with Spanish 121 and 122.

088—013. ADVANCED COMPOSITION AND CONVERSATION MR. ESPADAS

Three hours per week. *Three semester hours.*

088—014. ADVANCED COMPOSITION AND CONVERSATION MR. ESPADAS

Three hours per week. *Three semester hours.*

088—121. SPANISH THEATRE SINCE 1800 MR. RAPPOCCIO

Prerequisite, Spanish 014 or permission of the instructor. Three hours per week. *Three semester hours.*

088—122. SPANISH PROSE SINCE 1800 MR. RAPPOCCIO

Prerequisite, Spanish 014 or permission of the instructor. Three hours per week. *Three semester hours.*

*088—123. THEATRE OF THE SIGLO DE ORO MR. PAUL

Prerequisite, Spanish 014 or permission of the instructor. Three hours per week. *Three semester hours.*

*088—124. PROSE OF THE SIGLO DE ORO—EXCEPT CERVANTES MR. PAUL

A course complementing Spanish 127 through study of the contemporaries of Cervantes. Prerequisite: Spanish 014 or permission of the instructor. Three hours per week. *Three semester hours.*

Spanish 123 and 124 alternate with Spanish 126 and 134.

088—126. 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 121, 122, 123, 124, 134 or permission of the instructor. Three hours per week. *Three semester hours.*

*This course is not offered in 1973-1974.

URSINUS COLLEGE BULLETIN

088—127. CERVANTES

MR. PAUL

Don Quijote, the *Novelas Ejemplares*, and other works of Cervantes. Prerequisite: Spanish 014 or permission of the instructor. Three hours per week. *Three semester hours.*

088—128. ADVANCED GRAMMAR

STAFF

Intended primarily for Spanish majors who plan to teach. Prerequisites: Spanish 014 and at least one year of a Spanish literature course. Three hours per week. *Three semester hours.*

*088—132. 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.*

088—134. SPANISH LYRIC POETRY

MR. PAUL

Prerequisite, Spanish 014 or permission of the instructor. Three hours per week. *Three semester hours.*

090—SOCIOLOGY

MR. N. MILLER

090—001. INTRODUCTION TO SOCIOLOGY

MR. 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—002. INTRODUCTION TO SOCIOLOGY

MR. MILLER

A continuation of Sociology 001. Problems to which particular attention is given include urbanization, public opinion and propaganda, marriage and the family and crime and delinquency. Prerequisite, Sociology 001. Three hours per week. *Three semester hours.*

SPANISH

See under *Romance Languages*

SWEDISH

See under *Germanic Languages*

*This course is not offered in 1973-1974.

SPECIAL OFFERINGS**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	DR. RICE AND DIVISIONAL TUTORS
203. HUMANITIES	DR. BYERLY AND DIVISIONAL TUTORS
204. HUMANITIES	DR. BYERLY AND DIVISIONAL TUTORS
205. SOCIAL SCIENCES	DR. VISSER AND DIVISIONAL TUTORS
206. SOCIAL SCIENCES	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

Integrated Physical Science Course

CMP267-001. INTEGRATED GENERAL CHEMISTRY, MATHEMATICS AND PHYSICS
STAFFS OF THE CHEMISTRY, MATHEMATICS AND PHYSICS DEPARTMENTS

A combined course of general chemistry, analytic geometry, calculus and general physics which avoids repetition and takes advantage of the complementary nature of these subjects. As the calculus is developed it is utilized in the presentation of the concepts of chemistry and physics. A knowledge of the elements of trigonometry is assumed.

It includes a study of the basic theories and laws of chemistry covering the common elements of the periodic system, their interactions and energy relationships. The mathematics portion is an integrated study of analytic geometry and calculus with respect to functions of one variable. The coverage is equivalent to the content of Mathematics 029. Elementary mechanics and heat comprise the physics content. Emphasis is placed on gaining an understanding of basic concepts of physics. An attempt is made to foster an analytical approach to the sciences through the application of mathematical and physical principles to physical problems.

Seven hours of lecture; two three hour laboratories, one in chemistry and one in physics, per week. *Nine semester hours.*

CMP267-002. INTEGRATED GENERAL CHEMISTRY, MATHEMATICS AND GENERAL PHYSICS

STAFFS OF THE CHEMISTRY, MATHEMATICS AND PHYSICS DEPARTMENTS

A continuation of course 267-001. The chemistry is a study of the oxidation states of the common elements, chemical equilibrium, solubility and pH. The chemistry laboratory work deals with the qualitative separation of the common cations and anions. The mathematics portion is a continuation of the study of analytic geometry and calculus. It is equivalent to Mathematics 030. The physics subjects covered include sound, light, electricity and magnetism.

Prerequisite, course 267-001. Completion of course 267-002 is prerequisite for subsequent chemistry and physics courses and satisfies the prerequisite for Mathematics 031. Seven hours of lecture; two three-hour laboratories, one in chemistry and one in physics, per week. *Nine semester hours.*

A student who fails CMP267 may receive three credits in chemistry, mathematics or physics upon recommendation of the CMP teaching staff. The recommendation is to be based on the student's performance during the semester he failed. Credit for only one or two of the three subjects may be obtained in this way, making it possible to redeem three or six semester hours. When credit is granted in chemistry at the end of the first semester of CMP, it enables the student to enroll in Chemistry 002; in mathematics, Mathematics 002 or Mathematics 030; in physics, Physics 002. The maximum grade assigned will be within the "D" range.

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.*

005—150. BIOLOGY	045—150. HISTORY
010—150. CHEMISTRY	050—150. MATHEMATICS
016—150. GREEK	060—150. PHILOSOPHY-RELIGION
017—150. LATIN	065—150. PHYSICS
020—150. ECONOMICS	070—150. POLITICAL SCIENCE
032—150. ENGLISH LITERATURE	075—150. PSYCHOLOGY
035—150. GERMAN	086—150. FRENCH
040—150. HEALTH AND PHYSICAL EDUCATION	088—150. SPANISH

027—Intercollege Seminar

027—002. 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.*

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—001. 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. *Three semester hours.*

028—002. 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 001. Three hours per week. *Three semester hours.*

030—World Literature

030—001. WESTERN LITERATURE STAFF
 Critical reading of selected representative works from Western literature. Three hours per week. *Three semester hours.*

030—002. WESTERN LITERATURE STAFF
 A continuation of World Literature 001. Prerequisite, Course 001. Three hours per week. *Three semester hours.*

*030—003. NON-WESTERN LITERATURE STAFF
 Critical reading of selected representative works from non-Western literature. Three hours per week. *Three semester hours.*

*030—004. NON-WESTERN LITERATURE STAFF
 A continuation of World Literature 003. Three hours per week. *Three semester hours.* World Literature 001, 002 and 003, 004 are offered in alternate years. Student may elect both year courses for credit.

*This course is not offered in 1973-1974.

DEPARTMENTAL REQUIREMENTS

BIOLOGY (B.S.)

Adviser—Professor Allen

First Year

CMP267-001, 002	18
English Composition 001, 002	6
Language 001, 002 or 003, 004	6
Physical Education 101, 102	—
	<hr/>
	30

Second Year

Biology 011, 012	8
Chemistry 007, 008	8
Pivotal Humanities	6
Language 003, 004	6
or	
Pivotal Social Sciences	6
Electives	3
	<hr/>
	31

Third Year

Biology 019	4
Biology 021	3
Biology 014	4
Pivotal Social Sciences	6
or	
Electives	3
Biology Electives	10
Electives	10
	<hr/>
	30

Fourth Year

Biology 031	3
Biology Electives	3
Electives	24
	<hr/>
	30

CHEMISTRY (B.S.)

Adviser—Professor Staiger

First Year

CM267—001, 002	18
English Composition	6
Language 001, 002 or 003, 004	6
Physical Education 101, 102	—
	<hr/>
	30

Second Year

Mathematics 031, 032	6
Chemistry 007, 008	8
Chemistry 003, Physics 004	8
Language 003, 004	6
Humanities or Social Science	6
	<hr/>
	34

Third Year

Chemistry 009, 010	8
Chemistry 011, 004	8
Humanities or Social Science	6
German 011, 012	6
or	
Radial	7
	<hr/>
	31

Fourth Year

Chemistry 005, 006	6
Chemistry 013, 012	6
Chemistry 021, 022, 023, 030	3
Physics 007, 008	4
German 011, 012 or	6
Radial	6
	<hr/>
	31

DEPARTMENTAL REQUIREMENTS

CLASSICS (B.A.)

Adviser—Professor Wickersham

First Year

English Composition 001, 002	6
History 001, 002	6
Greek 001, 002	6
Latin 001, 002 or 003, 004 or 005, 006	6
Elective	6
Physical Education 101, 102	—
	30

Second Year

Social Science	6
Science	6
Greek 003, 004	6
Latin	6
Electives	6
	—
	30

Third Year

Latin or Greek	6
Electives	24
	—
	30

Fourth Year

Greek 007	3
Latin or Greek	3
Electives	24
	—
	30

ECONOMICS (B.A.)

Adviser—Professor Hunter

First Year

English Composition 001, 002	6
Science	6
Foreign Language	6
Mathematics 001, 022	6
Economics 003, 004	6
Physical Education 101, 102	—
	30

Second Year

Foreign Language 003, 004 (if not completed)	6
Humanities Pivotal	6
Mathematics 013, 014	4
Economics Electives	6
Social Science Pivotal	6
Electives	2
	—
	30

Third Year

Economics 026, 027	6
Economics Electives	3
Elective Radial	2
Electives	19
	—
	30

Fourth Year

Economics 035 or 036	3
Economics Electives	6
Electives	21
	—
	30

ENGLISH (B.A.)

Adviser—Professor Storey

First Year

English Composition 001, 002	6
Humanities	6
Science	6
Foreign Languages	6
Social Science	6
Physical Education 101, 102	—
	—
	30

Second Year

English Literature (Candidates for teaching should take 014)	12
Foreign Language (if not completed)	6
Radial Courses	6
Other Electives	6
	—
	30

URSINUS COLLEGE BULLETIN

Third Year

English Literature	12
Radial Courses	6
Other Electives	12
	<hr/>
	30

Fourth Year

English Literature	6
Electives	24
	<hr/>
	30

GERMAN (B.A.)

Adviser—Professor Hartzell

First Year

English Composition 001, 002	6
History 001, 002	6
Science	6
German 001, 002 or 003, 004	6
Other Language 001, 002 or 003, 004 .	6
Physical Education 101, 102	—
	<hr/>
	30

Second Year

English Literature 003, 004	6
Psychology 001	3
Radial Courses	6
German 003, 004 or 005, 006	6
Other Language 003, 004 (if not completed)	6
Electives	3
	<hr/>
	30

Third Year

German 005, 006 (if not completed)	6
German 007, 008 or 009, 010 or 015, 016	6
German 013, 014	6
Electives	12
	<hr/>
	30

Fourth Year

German 009, 010 or 007, 008 or 015, 016	6
German 013, 014	6
Philosophy	6
Electives	12
	<hr/>
	30

**HEALTH AND PHYSICAL
EDUCATION (B.S.)**

Adviser—Professor Bailey

First Year

English Composition 001, 002	6
History 001, 002	6
Foreign Language	6
Biology 001, 002	6
Physical Education 031, 032	6
Physical Education 301, 302	4
	<hr/>
	34

Second Year

Foreign Language (if not completed)	6
Biology 017, 018	6
Education 002	3
Education 031	3
Education 032	3
Physical Education 043	3
Physical Education 303, 304	4
Psychology 001	3
Physical Education 044	2
Electives	3
	<hr/>
	36

Third Year

Physical Education 051, 052	4
Physical Education 054	2
Physical Education 055, 056	4
Physical Education 057, 058	4
Physical Education 061	3
Physical Education 305, 306	4
Electives	11
	<hr/>
	32

DEPARTMENTAL REQUIREMENTS

Fourth Year

Education 005	8
Education 041	2
Education 044	3
Physical Education 062	2
Physical Education 064	3
Physical Education 307, 308	2
Psychology 008	3
Electives	5
	—
	28

HISTORY (B.A.)

Adviser—Professor Davis

First Year

English Composition 001, 002	6
History 001, 002	6
Science	6
Foreign Language	6
Political Science 001, 002	6
Physical Education 101, 102	—
	—
	30

Second Year

English Literature 003, 004 or 019, 020.	6
Foreign Language 003, 004 (if not completed)	6
Psychology 001	3
Economics 003, 004	6
History 013, 014	6
Electives	3
	—
	30

Third Year

Sociology	3
History 003, 004 or 005, 006 or 007, 008	6
History Seminar	2
Electives	19
	—
	30

Fourth Year

History	8
Electives	22
	—
	30

MATHEMATICS (B.S.)

Adviser—Professor Dennis

First Year

English Composition 001, 002	6
Foreign Language 001, 002 or 003, 004.	6
Humanities	6
Mathematics 029, 030	6
Physics 001, 002	8
Physical Education 101, 102	—
	—
	32

Second Year

Foreign Language 003, 004 (if not completed)	6
Social Science	6
Mathematics 031	3
Mathematics 033, 034	6
Radial Courses	6
Electives	3
	—
	30

Third Year

Radial Courses	6
Mathematics	9
Electives	15
	—
	30

Fourth Year

Mathematics	6
Electives	22
	—
	28

ALTERNATE MATHEMATICS (B.S.)

Adviser—Professor Dennis

First Year

English Composition 001, 002	6
Foreign Language 001, 002 or 003, 004	6
CMP267—001, 002	18
Physical Education 101, 102	—
	—
	30

URSINUS COLLEGE BULLETIN

Second Year

Foreign Language 003, 004 (if not completed)	6
Humanities	6
Mathematics 031	3
Mathematics 033, 034	6
Social Science	6
Electives	3
	<hr/>
	30

Third Year

Radial Courses	6
Mathematics	9
Electives	15
	<hr/>
	30

Fourth Year

Mathematics	6
Radial Courses	6
Electives	18
	<hr/>
	30

PHILOSOPHY AND RELIGION (B.A.)

Adviser—Professor Williamson

First Year

English Composition 001, 002	6
Foreign Language	6
Science	6
Social Science	6
Philosophy 101, 102	6
Physical Education 101, 102	—
	<hr/>
	30

Second Year

Foreign Language 003, 004 (if not completed)	6
Religion 201, 202	6
Radial Courses	12
Electives in Area of Concentration ..	3
Electives	3
	<hr/>
	30

Third Year

Philosophy or Religion	15 or 18
Electives in Area of Concentration	6 or 9
Electives	6 or 9
	<hr/>
	30

Fourth Year

Philosophy or Religion	3
Senior Seminar (109, 110)	6
Electives in Area of Concentration	3 or 6
Electives	18 or 21
	<hr/>
	30

PHYSICS (B.S.)

Adviser—Professor Snyder

First Year

English Composition 001, 002	6
Foreign Language	6
CMP267—001, 002	18
Physical Education 101, 102	—
	<hr/>
	30

Second Year

Humanities	6
Mathematics 031, 032	6
Physics 003, 004	8
Physics 007, 008	6
Physics 007a, 008a	2
Electives	3
	<hr/>
	31

Third Year

Mathematics 039, 040	6
Physics 015, 016	6
Radial Courses	6
Social Science	6
Electives	6
	<hr/>
	30

Fourth Year

Physics Courses	6
Radial Courses	6
Electives	18
	<hr/>
	30

DEPARTMENTAL REQUIREMENTS

POLITICAL SCIENCE (B.A.)

Adviser—Professor E. H. Miller

First Year

English Composition 001, 002	6
History 001, 002	6
Science	6
Foreign Language	6
Political Science 001, 002	6
Physical Education 101, 102	—
	30

Second Year

Foreign Language 003, 004 (if not completed)	6
Psychology 001	3
Economics 003, 004	6
Political Science 005, 006	6
Political Science 015, 016	6
Electives	3
	30

Third Year

Sociology 001, 002	6
History 013, 014	6
Political Science	8
Electives	4
Radial Courses	6
	30

Fourth Year

Political Science	3
Electives	27
	30

PSYCHOLOGY (B.S.)

Adviser—Professor Fletcher

First Year

English Composition 001, 002	6
Humanities or Psych. 001, 008	6
Foreign Language	6
Mathematics 001, 002 or 013, 014	6
Biology 001, 002	6
Physical Education 101, 102	—
	30

Second Year

Foreign Language 003, 004 (if not completed)	6
Mathematics 013, 014	4
Psychology 001, 008 or Humanities	6
Psychology 010	4
Psychology 022	3
Biology 021, 022	5
Radial Courses	3
	31

Third Year

Sociology 001, 002	6
Anthropology 001, 002	6
Psychology 033	4
Psychology 034 or 035	3
Radial Courses	9
Electives	2
	30

Fourth Year

Psychology 009, 040	6
Psychology 044	1
Psychology	3
Electives	20
	30

**ROMANCE LANGUAGES
FRENCH (B.A.)**

Adviser—Professor Reiner

First Year

English Composition	6
History 001, 002	6
Science	6
French 003, 004	6
Foreign Language	6
Physical Education 101, 102	—
	30

Second Year

English Literature 003, 004	6
Social Science (Pivotal)	6
French 005, 006	6
French 015, 016	6
Foreign Language 003, 004 (if not completed, or other radial course)	6
	30

URSINUS COLLEGE BULLETIN

<i>Third Year</i>	
History 003, 004 or 005, 006	6
French 011, 012 or 013, 014	6
French 021, 022 or 023, 024	6
Electives	12
	—
	30

<i>Fourth Year</i>	
Electives	30
	—
	30

SPANISH (B.A.)

Adviser—Professor Reiner

<i>First Year</i>	
English Composition 001, 002	6
History 001, 002	6
Science	6
Spanish 003, 004	6
Foreign Language	6
Physical Education	—
	30

<i>Second Year</i>	
English Literature 003, 004	6
Social Science (Pivotal)	6
Spanish 013, 014	6
Foreign Language 003, 004 (if not completed or other radial course) ..	6
Electives	6
	—
	30

<i>Third Year</i>	
History	6
Spanish 121, 122 or 123, 124	6
Spanish 125, 126 or 009, 010	6
Electives	12
	—
	30

<i>Fourth Year</i>	
Spanish 124 or 122	3
Spanish 128	3
Electives	12
Education Semester	14
	—
	30

<i>Fourth Year</i>	
Spanish 123, 124 or 121, 122	6
Electives	24
	—
	30

**SCIENCES (B.S.)
PREPARATION FOR SECONDARY
SCHOOL TEACHING IN THE SCIENCES**

I. CONCENTRATION IN BIOLOGY

Advisers—Professor Allen and
Professor Cogger

<i>First Year</i>	
CMP267-001, 002	18
English Composition 001, 002	6
Language 001, 002 or 003, 004	6
Physical Education 101, 102	—
	—
	30

<i>Second Year</i>	
Biology 011, 012	8
Biology 021, 022	5
Pivotal Humanities	6
Language 003, 004 or Pivotal Social Sciences	6
Psychology 001	3
Education 002	3
	—
	31

<i>Third Year</i>	
Biology 017, 018	6
Biology 015	3
Biology 014 or 019	4
Education 031, 032	6
Pivotal Social Sciences or Electives	6
Electives	5
	—
	30

<i>Fourth Year</i>	
Education 005	8
Education 044	3
Education 041, 043	3
Biology Electives	4
Electives	12
	—
	30

DEPARTMENTAL REQUIREMENTS

II. CONCENTRATION IN CHEMISTRY

Advisers—Professor Staiger and
Professor Cogger

First Year

CMP267—001, 002	18
English Composition 001, 002	6
Language 001, 002 or 003, 004	6
Physical Education 101, 102	—
	<hr/>
	30

Second Year

Chemistry 007, 008	8
Chemistry 003, Physics 004	8
Psychology 001	3
Education 002	3
Language 003, 004 or	3
Humanities	6
Electives	3
	<hr/>
	31

Third Year

Chemistry Electives	6
Biology 001, 002 or	6
Geology 001, 002	6
Humanities	6
Social Science	3
Education 031—032	6
Electives	3
	<hr/>
	30

Fourth Year

Physics 011, 012	6
Education 041, 043	3
Education 044	3
Education 005	8
Electives	10
	<hr/>
	30

III. CONCENTRATION IN PHYSICS

Advisers—Professor Snyder and
Professor Cogger

First Year

CMP267—001, 002	18
English Composition 001, 002	6
Language 001, 002 or 003, 004	6
Physical Education 101, 102	—
	<hr/>
	30

Second Year

Physics 003, 004	8
Mathematics 031, 032	6
Education 002	3
History 001, 002	6
Language 003, 004 or	6
Social Sciences	6
Psychology 001	3
	<hr/>
	32

Third Year

Physics 007, 008	6
Education 031, 032	6
Philosophy	3
Electives	15
	<hr/>
	30

Fourth Year

Education 005	8
Education 044	3
Education 041	2
Education 043	1
Physics 011, 012	6
Electives	10
	<hr/>
	30

**COURSE OUTLINE
PROGRAM LEADING TO
COMPREHENSIVE SCIENCE
CERTIFICATION**

Advisers—Professor Staiger and
Professor Cogger

First Year

CMP267—001, 002	18
English Composition 001, 002	6
Language 001, 002	6
or	
Language 003-004	6
	—
	30

Second Year

Biology 001, 002	6
Chemistry 003	4
Physics 004	4
History 001, 002	6
Language 003, 004	6
or	

Senior Symposium in
Senior Year

Psychology 001	3
Education 002	3
	—
	32

Third Year

Physics 011, 012	6
Chemistry 007, 008	8
Education 031, 032	6
Biology 017, 018	6
Psychology 008	3
	—
	27

Electives	3
	—
	30

Fourth Year

Geology 001, 002	6
Education 041, 043	3
Education 005	8
Education 044	3
	—
	20

Electives	10
	—
	30

**COURSE OUTLINE
PROGRAM LEADING TO GENERAL
SCIENCE CERTIFICATION FOR
JUNIOR HIGH SCHOOL AND
NON-COLLEGE PREPARATORY
SENIOR HIGH SCHOOL**

Advisers—Professor Snyder and
Professor Cogger

First Year

English Composition 001, 002	6
Language 001, 002 or 003, 004	6
CMP 267—001, 002	18
or	
Math. 029—030	6
Chem. 001—002	6
Physics 001—002	8
Physical Education 101, 102	—
	—
	30

Second Year

Biology 001, 002	6
or	
Biology 011, 012	8
Humanities	6
Education 002	3
Language 003, 004	
or Social Science	6
Additional Science (from area of	
major interest)	6
Radial Course	3
	—
	30 or 32

Third Year

Physics 011, 012	6
Additional Science (from area of	
major interest)	6
Radial Courses	9
Electives (Social Science if not	
completed)	9
	—
	30

Fourth Year

Education 041	2
Education 043	1
Education 044	3
Education 005	8
Geology 001, 002	6
Electives	10
	—
	30

DEPARTMENTAL REQUIREMENTS

**FIVE-YEAR COMBINED LIBERAL ARTS —
ENGINEERING PROGRAM
URSINUS COLLEGE (B.A.), THE
UNIVERSITY OF PENNSYLVANIA AND
THE UNIVERSITY OF SOUTHERN
CALIFORNIA (B.S. in Engr.)**

Adviser—Professor Snyder

**PLAN I FOR ELECTRICAL, CIVIL
OR MECHANICAL ENGINEERS**

First Year

English Composition 001, 002	6
Foreign Language 003, 004	6
CMP267—001, 002	18
Physical Education 101, 102	—
	30

Second Year

Radial Courses	6
Humanities	6
Physics 003, 004	8
Mathematics 031, 032	6
Drafting	3
Descriptive Geometry	3
	—
	32

Third Year

Radial Courses	6
Social Science	6
Physics 007, 014	6
Mathematics 039, 040	6
Electives	6
	—
	30

Fourth and Fifth Years

to be completed at the University of Pennsylvania or the University of Southern California.

**PLAN II FOR CHEMICAL OR
METALLURGICAL ENGINEERS**

First Year

English Composition 001, 002	6
Foreign Language	6
CMP267—001, 002	18
Physical Education 101, 102	—
	30

Second Year

Radial Courses	6
Humanities	6
Chemistry 003	4
Physics 004	4
Drafting	3
Mathematics 031, 032	6
	—
	29

Third Year

Radial Courses	6
Social Science	6
Chemistry 009, 010	8
Physics 003	4
Mathematics 039, 040	6
Electives	3
	—
	33

Fourth Year

to be completed at the University of Pennsylvania or the University of Southern California.

STUDENTS WHO WISH TO PREPARE FOR TEACHING, THE MINISTRY, OR FOR ADMISSION TO PROFESSIONAL SCHOOLS OF MEDICINE, DENTISTRY, VETERINARY MEDICINE, LAW OR NURSING SHOULD REFER TO "THE ADMISSION SECTION (CAREER OPPORTUNITIES)" WHERE SUGGESTED MAJORS ARE INDICATED.

DIRECTORY

BOARD OF DIRECTORS

	<i>First Elected</i>	<i>Term Expires</i>
JAMES M. ANDERSON, Wynnewood	1967	1977
ROBERT B. ANDERSON, B.S., M.S., Wayne	1972	1977
LILLIAN ISENBERG BAHNEY, B.A., Myerstown	1951	1976
RUSSELL C. BALL, JR., B.S., Paoli	1968	1973
JOSEPH T. BEARDWOOD, III, B.S., Glenside	1968	1973
THOMAS J. BEDDOW, B.A., J.D., Washington, D.C.	1958*	1974
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., Paoli	1962	1977
WILLIAM ELLIOTT, LL.D., Collegeville	1964	1974
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
EDWARD L. GRUBER, B.S., Pottstown	1967	1977
PAUL I. GUEST, B.A., J.D., LL.D., Gladwyne	1966	1976
WILLIAM F. HEEFNER, B.A., LL.B., Perkasio	1969	1974
DONALD L. HELFFERICH, B.A., J.D., LL.D., Pottstown	1927	1977
REV. MERRITT J. JEFFERS, B.S., M.S., B.D., D.D., Lebanon	1953	1973
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

*Did not serve 1968-1969

**Did not serve 1966-1967

DIRECTORY

REV. SHELDON E. MACKEY, B.A., B.D., D.D., LL.D., Glenside	1960	1976
ELLWOOD S. PAISLEY, B.S., LL.D., Philadelphia	1959	1974
BOIES PENROSE, B.A., LL.D., Devon	1964	1974
WILLIAM S. PETTIT, B.S. in Chem., M.S., Sc.D., Collegeville	1970	1975
WILLIAM R. ROBBINS, B.S., West Hartford, Conn.	1971	1976
CHARLES V. ROBERTS, B.S., Drexel Hill	1956	1976
DAVID M. SCHMID, B.S., Norristown	1971	1976
THEODORE R. SCHWALM, LL.D., Lancaster	1963	1973
E. EUGENE SHELLEY, B.S., LL.B., York	1971	1976
LYDIA GANSER TAXIS, B.S., Norristown	1970	1975
GEORGE L. THOMAS, JR., B.A., D.C.S., Lilypons, Md.	1951	1976
CLARENCE A. WARDEN, JR., LL.D., Haverford	1957	1977
ROY WENHOLD, B.S., M.D., Abington	1968	1973
HARLESTON R. WOOD, B.A., LL.D., Gladwyne	1956	1976

Directors Emeriti

CHARLES A. BEHNEY, B.A., M.D., Bisbee, Arizona	1937	1969
CHARLES LACHMAN, LL.D., Wayne	1949	1969

COMMITTEES OF THE BOARD OF DIRECTORS

Executive Committee: T. R. Schwalm, Chairman; R. Connor, P. L. Corson, T. P. Glassmoyer, P. I. Guest, W. S. Pettit, C. A. Warden, Jr.

Finance Committee: E. S. Paisley, Chairman; R. C. Ball, Jr., J. L. Eastwick, E. L. Gruber, W. F. Heefner, D. L. Helfferich, A. Lewis, Jr., W. R. Robbins, H. R. Wood.

Committee on Buildings and Grounds: J. M. Anderson, Chairman; D. S. Light, E. S. Paisley, C. V. Roberts, E. E. Shelley.

Committee on Government and Instruction: M. E. Gladfelter, Chairman; R. B. Anderson, J. T. Beardwood, III, P. I. Guest, W. F. Heefner, W. S. Pettit.

Committee on Long-Term Planning: E. S. Paisley, Chairman; C. E. Blum, W. F. Heefner, H. P. Laughlin, W. S. Pettit, T. R. Schwalm.

Budget Committee: T. R. Schwalm, Chairman; R. B. Anderson, W. Elliott, D. L. Helfferich, E. S. Paisley, W. S. Pettit, D. M. Schmid, G. L. Thomas, Jr.

Nominating Committee: T. P. Glassmoyer, Chairman; T. J. Beddow, C. E. Blum, W. S. Pettit, L. G. Taxis.

Committee on Athletics: E. S. Paisley, Chairman; L. I. Bahney, M. J. Jeffers, D. S. Light.

Committee on Library: W. S. Pettit, Chairman; S. E. Mackey, B. Penrose, R. Wenhold.

OFFICERS OF THE CORPORATION

President: THEODORE R. SCHWALM, Lancaster

First Vice-President: PAUL I. GUEST, Gladwyne

Second Vice-President: SHELDON E. MACKKEY, Glenside

Secretary: ELLWOOD S. PAISLEY, Philadelphia

Assistant Secretary: D. STERLING LIGHT, Norristown

Treasurer: ELLWOOD S. PAISLEY, Philadelphia

THE ADMINISTRATION

- WILLIAM S. PETTIT, M.S., Sc.D., *President*
 DONALD L. HELFFERICH, J.D., LL.D., *Chancellor*
 RICHARD P. RICHTER, M.A., *Vice President for Administrative Affairs*
 RICHARD G. BOZORTH, Ph.D., *Dean of the College*
 JAMES P. CRAFT, JR., Ph.D., *Assistant Dean of the College*
 GEOFFREY DOLMAN, M.A., *Dean of Admissions*
 H. LLOYD JONES, JR., M.A., *Associate Dean of Admissions*
 MRS. RUTH R. HARRIS, M.A., *Dean of Women, Director of Student Activities*
 RICHARD J. WHATLEY, M.S., *Dean of Men*
 CHARLES L. LEVESQUE, Ph.D., *Director of the Evening and Summer Schools*
 ELLWOOD S. PAISLEY, B.S., LL.D., *Treasurer*
 NELSON M. WILLIAMS, *Business Manager*
 W. ARTHUR SWITZER, M.B.A., *Government Relations and
 Financial Aid Officer*
 ROBERT V. COGGER, Ph.D., *Director of Placement*
 EVERETT M. BAILEY, M.A., *Director of Athletics*
 CALVIN D. YOST, JR., Ph.D., *Librarian*
 FRANK SMITH, B.A., *Director of Development*
 JOHN H. THIESSEN, B.A., *Public Relations Assistant*
 MILTON E. DETTERLINE, M.Div., *College Chaplain, Director of
 Alumni and Church Affairs*
 STEPHEN K. WILLIAMS, M.D., *Medical Director*
 ARTHUR MARTELLA, M.D., *Associate Medical Director*
 MRS. GERALD T. CLAYCOMB, R.N., *Resident Nurse*
 MRS. VERNA SHUSHNAR, R.N., *Resident Nurse*
 MRS. LEONARD A. DILLIPLANE, R.N., *Resident Nurse*
 MRS. EDWARD V. WINNER, R.N., *Resident Nurse*
 HERMAN M. WESSEL, Ph.D., L.H.D., *Director of College Union*
 HOWARD W. SCHULTZE, *Director of Physical Facilities*
 FREDERICK L. KLEE, B.S., *Assistant Director of Physical Facilities*
 WILLIAM S. FRIEDEBORN, B.A., *Manager of the Book Store*
 KENNETH L. SCHAEFER, B.A., *Admissions Counsellor*
 FREDERICK W. HEATH, B.S., *Food Service Director*

THE FACULTY, 1972-73*

WILLIAM SCHUYLER PETTIT, M.S., Sc.D., *President; Professor of Chemistry*
B.S. in Chem.; M.S., University of Pennsylvania; Sc.D., Ursinus College.

DONALD LAWRENCE HELFFERICH, J.D., LL.D., *Chancellor*
B.A., Ursinus College; LL.B., Yale University School of Law; LL.D., Ursinus
College, Temple University, Dickinson.

ELIZABETH BRETT WHITE, Ph.D., *Professor of History, Emeritus*
B.A., Cornell University; M.A., University of Wisconsin, Ph.D., Clark
University.

**JAMES LANE BOSWELL, Ph.D., *Professor of Economics, Emeritus*
B.A., Georgetown College; M.A., Ph.D., University of Pennsylvania.

FRANK LEROY MANNING, Ph.D., *Professor of Mathematics, Emeritus*
B.S., Cornell University; M.S., Rutgers University; Ph.D., Cornell University.

WILLIAM JOHN PHILLIPS, Ph.D., *Professor of English, Emeritus*
B.A., M.A., Ph.D., University of Pennsylvania.

ELEANOR FROST SNELL, M.A., *Professor of Physical Education, Emeritus*
B.A., University of Nebraska; M.A., Columbia University.

LEVIE VAN DAM, Ph.D., *Professor of Biology, Emeritus*
B.S., M.S., Ph.D., Groningen State University, The Netherlands

DONALD GAY BAKER, Ph.D., *Professor of Greek, Emeritus*
B.A., Haverford College; M.A., Ph.D., Harvard University.

WILLIAM FRANKLIN PHILIP, Mus. Doc., *Professor of Music, Emeritus*
Mus. B., Mus. M., Mus. Doc., State Academy of Church and School Music,
Berlin.

GEORGE WELLINGTON HARTZELL, Ph.D., *Professor of German*
B.A., Lehigh University; M.A., Ph.D., University of Pennsylvania.

*Listed in order of appointment to present rank; appointments of the same
year are listed alphabetically.

**Deceased September 3, 1972.

CALVIN DANIEL YOST, JR., Ph.D., *Librarian; N. E. McClure Professor of English*
 B.A., Ursinus College; M.A., Ph.D., University of Pennsylvania.

EVERETT MARTIN BAILEY, M.A., *Director of Athletics; Professor of Physical Education*
 B.P.E., B.S., Springfield College; M.A., Columbia University.

*JOHN JACOB HEILEMANN, Ph.D., *Professor of The College, Professor of Physics*
 B.A., M.A., Ph.D., University of Pennsylvania

EUGENE HERBERT MILLER, Ph.D., *Professor of Political Science*
 B.A., Ursinus College; M.A., Ph.D., Clark University

FOSTER LEROY DENNIS, Ph.D., *Professor of Mathematics*
 B.S., Ursinus College; M.A., Cornell University; Ph.D., University of Illinois.

ALLAN LAKE RICE, Ph.D., R.N.O., *Professor of German*
 B.A., M.A., Ph.D., University of Pennsylvania

**HELEN THOMPSON GARRETT, Ph.D., *Professor of French*
 B.A., Swarthmore College; *Diplome*, University of Lille; Ph.D., University of Pennsylvania.

GARFIELD SIEBER PANCOAST, Ph.D., *Professor of Political Science*
 B.S., Ursinus College; M.A., Ph.D., University of Pennsylvania.

RICHARD MUMMA FLETCHER, Ph.D., *Professor of Psychology*
 B.A., Franklin and Marshall College; Ph.D., Pennsylvania State University.

ROGER POWELL STAIGER, Ph.D., *David Laucks Hain Professor of Chemistry*
 B.S., Ursinus College; M.S., Ph.D., University of Pennsylvania.

GEORGE GILBERT STOREY, Ph.D., *Professor of English*
 B.A., Geneva College; M.A., Duke University; M.A., Ph.D., Harvard University.

DONALD JAMES HUNTER, Ph.D., *Professor of Economics*
 B.S., University of Illinois; M.S., Ph.D., Iowa State University

*Deceased February 8, 1972.

**Deceased April 24, 1972.

URSINUS COLLEGE BULLETIN

EVAN SAMUEL SNYDER, Ph.D., *Professor of Physics*

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.

PHILIP EUGENE WILLIAMS, Ph.D., *Adjunct Professor of English*

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

JAMES DOUGLAS DAVIS, M.A., *Professor of History*

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

WILLIAM THOMAS PARSONS, Ph.D., *Professor of History*

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

BERNARD OBLENIS BOGERT, M.A., *Visiting Professor of Geology*

B.S., Lafayette College; M.A., Columbia University.

ELMER ANDREW LISSFELT, M.A., *Visiting Professor of Education*

B.A., M.A., University of Pittsburgh.

EDWARD RICE SELTZER, M.Ed., *Visiting Professor of Education*

A.B., Muhlenberg College; M.Ed., Temple University, Pennsylvania State University.

CHARLES LOUIS LEVESQUE, Ph.D., *Director of the Evening and Summer Schools, Visiting Professor of Applied Science*

A.B., A.M., Dartmouth College; Ph.D., University of Illinois.

EVERETT VERNON LEWIS, Ph.D., *Professor of Mathematics*

B.S., Ph.D., Massachusetts Institute of Technology.

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.

RAYMOND VICTOR GURZYNSKI, M.Ed., *Associate Professor of Physical Education*

B.S., Ursinus College; M.Ed., Temple University.

GEOFFREY DOLMAN, M.A., *Dean of Admissions; Associate Professor of English*
 B.A., M.A., University of Pennsylvania.

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.

HOWARD LLOYD JONES, JR., M.A., *Associate Dean of Admissions; Associate Professor of English*
 B.A., University of Delaware; M.A., University of Pennsylvania.

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

CONRAD EDWARD KRUSE, D.Sc., *Associate Professor of Biology*
 B.Sc., D.Sc., Philadelphia College of Pharmacy and Science; M.Sc., University of Wisconsin.

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

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

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.

URSINUS COLLEGE BULLETIN

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.

ROBERT VICTOR COGGER, Ph.D., *Director of Placement;*
Associate Professor of Education
B.A., New York State College for Teachers; M.A., Ph.D., Yale University.

RICHARD JACOB WHATLEY, M.S., *Dean of Men; Assistant Professor of*
Physical Education
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.

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

ADELE PACK BOYD, M.Ed., *Assistant Professor of 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.

GEORGE ARTHUR SHARP, Ph.D., *Assistant Professor of Psychology*
B.S., Thiel College; M.P.S., University of Colorado; M.A., Ph.D., Temple
University.

ALBERT CURTIS ALLEN, JR., Ph.D., *Assistant Professor of Biology*
B.A., College of Wooster; M.A., Ph.D., University of Michigan.

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
- BARRY SHERWOOD FRANCIS, Ph.D., *Assistant Professor of Psychology*
 B.S., Ursinus College; M.A., Ph.D., University of Arizona.
- KEITH JORDAN HARDMAN, Ph.D., *Assistant Professor of Philosophy and Religion*
 B.D., Princeton Theological Seminary; B.A., Haverford College; M.A., Columbia University; Ph.D., University of Pennsylvania.
- JOHN THEOKRITOS PETRAKIS, Ph.D., *Assistant Professor of Economics*
 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.
- DOUGLAS ARTHUR DAWSON, M.Ed., *Assistant Professor of Art*
 B.S., Kutztown State College; M.Ed. in Fine Arts, Temple University.
- GEORGIA DOROTHY FERRELL, M.A., *Assistant Professor of Health and Physical Education*
 B.S., Ursinus College; M.A., University of North Carolina.
- 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.

URSINUS COLLEGE BULLETIN

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.

EBERHARD HANS GEIGER, M.A., *Instructor in German*

Attended Munich and Tübingen Universities; M.A., University of Penn-
sylvania.

ANNETTE VOCK LUCAS, M.A., *Instructor in French*

B.A., George Washington University; M.A., New York University.

JANE PERRETTEN SHINEHOUSE, P.T., *Instructor in Biology*

B.S., Ursinus College; P.T., University of Pennsylvania.

JOSEPH FRANCIS CAFFREY, Ph.D., *Instructor in Russian*

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

GARY WILSON, Ph.D., *Instructor in English*

B.S., St. Joseph's College; M.A., Villanova University; Ph.D., Temple Uni-
versity.

CONSTANCE WARREN POLEY, B.S., *Instructor in Physical Education*

B.S., Ursinus College.

JEANETTA RENEBERGER BICKING, M.S., *Instructor in Chemistry*

B.S., Ursinus College; M.S., University of Delaware.

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.
- NANCY JOHNSON ADAMS, M.S. in L.S., *Assistant Circulation Librarian*
 B.A., Muhlenberg College; M.S. in L.S., University of Kentucky.
- JOHN JUSTIN McCARTHY, LL.B., *Instructor in Economics*
 B.A., University of North Carolina; LL.B., University of Pennsylvania.
- TARAS DANYLO ZAKYDALSKY, M.A., *Instructor in Philosophy*
 B.A., University of Toronto; M.A., Bryn Mawr College.
- JAMES HOUGHTON KANE, M.A., *Instructor in Political Science*
 B.A., Houghton College; M.A., University of Pennsylvania.
- BRONWEN UMBERGER KRAM, M.L.S., *Assistant Librarian*
 B.S., Ursinus College; M.L.S., Rutgers, The State University.
- 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
- JANET GURKIN ALTMAN, M.Ph., *Instructor in Romance Languages*
 B.A., Duke University; M.Ph., Yale University.
- JUAN ESPADAS, M.A., *Instructor in Romance Languages*
 B.A., M.A., University of Illinois.
- DERQ HOWLETT, M.S., *Instructor in Music*
 B.A., Princeton University; M.S., West Chester State College.
- FRED HENRY KOPP, JR., M.S.E., *Instructor in Health and Physical Education*
 B.S., Southern Connecticut State College; M.S.E., Cortland State College.
- JAMES CARLETON MILLER, B.A., *Instructor in Anthropology and Sociology*
 B.A., Wilmington College.
- JAMES CRAIG THOMPSON, M.L.S., *Assistant Cataloguer Librarian*
 B.A., Princeton University; M.A., M.L.S., University of Wisconsin.

OFFICERS OF THE FACULTY

Chairman, THE PRESIDENT

Secretary, PROFESSOR STOREY

ACADEMIC COUNCIL

The President

Professor Meyer

Professor Byerly

Professor Fletcher

Mrs. Lucas

Professor Snyder

The Dean

Professor Staiger

Professor B. Schultz

ADVISERS

Biology Department, Professor Allen

Chemistry Department, Professor Staiger

Classics Department, Professor Wickersham

Economics Department, Professor Hunter

Engineering, Professor Snyder

English Department, Professor Storey

Germanic and Slavic Languages Department, Professor Hartzell

Health and Physical Education, Professor Bailey

History Department, Professor Davis

Mathematics Department, Professor Dennis

Philosophy and Religion Department, Professor Williamson

Physics Department, Professor Snyder

Political Science Department, Professor Miller

Pre-Professional, Professor Lewis

Psychology Department, Professor Fletcher

Romance Languages Department, Professor Reiner

Undesignated,

Humanities, Professor Hartzell

Social Sciences, Professor Craft

Natural Sciences, Professor Hess

Graduate Scholarships, Professor Yost

Foreign Students, Professor Rice

Freshman Class, Professor Rappoccio

Sophomore Class, Professor BreMiller

Junior Class, Professor Hardman

Senior Class, Professor Meyer

COMMITTEES OF THE FACULTY

- Admission:* The President, Chairman; Deans Bozorth, Dolman, Jones; Professor B. Schultz.
- Standing:* The President, Chairman; Dean Bozorth, Professor BreMiller, Deans Dolman, Harris, Jones, Whatley.
- Library:* The President, Chairman; the Librarian, Professors Barth, Davis, Hardman, Hunter, B. Schultz; Mrs. Staiger, Professor Symons.
- Scholarships:* The President, Chairman; Deans Bozorth, Craft, Dolman, Jones; Mr. Switzer.
- Discipline:* Dean Craft, Chairman; Deans Bozorth, Harris; Professors Hess, Kruse, Snyder; Dean Whatley. Alternates: Professors Bailey, Takats, Visser.
- Student Activities:* Dean Harris, Chairman; the Chaplain, Professors Allen, BreMiller, Hartzell, Hess, Richter, B. Schultz; Dean Whatley.
- Student Publications:* Professor Storey, Chairman; Mrs. Adams; Professors Cope, DeCatur, Richter; Dean Jones; Mr. Thiessen.
- Athletics:* Professor Bailey, Chairman; Professors Boyd, Dennis, Gurzynski, Miller, Pancoast; Dean Whatley.
- Forum and Cultural Activities:* Dean Harris, Chairman; Professors Cope, Dawson, Hardman; Mr. Howlett; Professor Williamson.
- Professional School Credentials:* Professor Lewis, Chairman; Professor Allen; Dean Bozorth; Professors Fletcher, Kruse, Snyder, Staiger.

RESIDENT HEADS

- MRS. LAWRENCE H. PEARSON, B.S., *Beardwood Hall*
- MRS. EMILY O. FRIERSON, *Clamer Hall*
- MRS. MARY MOYER, *Duryea Hall*
- MISS GEORGIA D. FERRELL, M.A., *Resident Hall Counselor, Hobson Hall*
- MRS. GLENMORE G. WOODRING, *Paisley Hall*
- MRS. A. E. SCHELLHASE, *Schaff Hall*
- MRS. MARGARET A. MYERS, *Schreiner Hall*
- MRS. HAROLD L. MERRICK, *Stauffer Hall*
- MRS. BERTHA E. OTTERSTETTER, *942 Main Street*
- MISS CRIS E. CRANE, B.S., *Resident Hall Counselor, 944 Main Street*

PRIZES, HONORS, DEGREES

AWARDED IN 1972

- The Alumni Senior Award—Carol Lynn Wasserman, Larry Stephen Andrews
The American Chemical Society Award—Larry Stephen Andrews
The John C. Boyer Memorial Prize—Walter Vladimir Gerasimowicz
The George Ditter Prize—James Randolph Stellar
The Duttera Prize—Barbara Helen Frank
The Ehret Prize—Michael Tracy Cash
The Philip H. Fogel Memorial Prize—Ronald Robert Lausch
The Ronald C. Kichline Athletic Prize—Robert Alexander Mosakowski
The William L. Lettinger Chemistry Award—Larry Stephen Andrews
The Elizabeth Rockefeller McCain Prize—Andrew Ray Rifkin
The Paisley Prize—William Arey Eubanks
The Peters Prize—Ronald Robert Lausch
The Robert Trucksess Prize—David George Gates
The Ursinus Women's Club Prize—Robin Gale Cash
The Wagman Prize—Carol Lynn Wasserman
The Elizabeth B. White Prize—Elizabeth Carol Orsburn
The Professor Elizabeth B. White Prize—Elaine Hansen Rodgers
The Whitian Prize—Susan Jean Miersch

COMMENCEMENT HONORS

- VALEDICTORIAN: Jane Lisa Siegel — summa cum laude
SALUTATORIAN: Ned William Schillow — magna cum laude
MAGNA CUM LAUDE: M. Juanita Beslanovits
Francis Xavier Buschman
Evelyn Virginia Sohl
CUM LAUDE: Karen Jane Humphreys
Larry Stephen Andrews
Susan Kay Esterly
John Julius Fioravanti, Jr.
Andrea Aldrich Vaughan

EVENING SCHOOL HONORS

SUMMA CUM LAUDE: Ruth Miller Heckler
 MAGNA CUM LAUDE: James Ray Derstine
 CUM LAUDE: Leo Joseph Boarts, Jr.
 Gerard Albert Cloutier
 Joseph Terrance Ring

DEPARTMENTAL HONORS

CHEMISTRY: Larry Stephen Andrews
 ECONOMICS: Francis Xavier Buschman
 Gerald John Green
 Robert Walter Shmihluk
 ENGLISH: Cathy Szilagyi Glass
 Judith Earle Grumet
 FINE ARTS: Richard Maynard Miller, Jr.
 HEALTH and PHYSICAL EDUCATION: Harriet Lynn Reynolds
 HISTORY: Elaine Hansen Rodgers
 MATHEMATICS: Ned William Schillow
 PHILOSOPHY and RELIGION: Ronald Robert Lausch
 PSYCHOLOGY: Richard Eugene Dougherty
 John Julius Fioravanti, Jr.
 Jenny Weston Michael
 James Randolph Stellar
 ROMANCE LANGUAGES— FRENCH: Shirley Ann Watson
 SPANISH: Karen Jane Humphreys

CHAPTER SCHOLARS

Larry Stephen Andrews	Ned William Schillow
Rebecca Ann Cipro	Jane Lisa Siegel
John Julius Fioravanti, Jr.	Evelyn Virginia Sohl
Kathy Louise Gerber	

DEGREES

Doctor of Laws (Honorary)	James Daniel Glasse
Doctor of Laws (Honorary)	William Elliott
Doctor of Laws (Honorary)	Thomas Parvin Glassmoyer
Doctor of Laws (Honorary)	Paul Ivins Guest
Doctor of Laws (Honorary)	George Lloyd Murphy
Doctor of Letters (Honorary)	Ashley Montagu
Doctor of Science (Honorary)	Theodore A. Burtis

ASSOCIATE IN ARTS

Alice Catherine Daneker
Claire Eleanor Strycharz

Eva Marie Webb

ASSOCIATE IN BUSINESS ADMINISTRATION

Patrick Gene Antonio
Howard Edward Barth
Elmer James Brunk
Ronald Eric Bywaters
Marie Edith Cole
Ralph Thomas Dastalfo
John William Fichter
Robert Edwin Fisher
Raymond Leroy Gehris
William Ellwood Good
Arthur Gene Haas
Kenneth Morris Mengel
Paul Robert Michener

Louis Joseph Mincarelli
Paul Lloyd Robbins
David Uriel Schmeltzle
James Stanley Schussler
Donald Jay Schwartz
Friedrich Otto Schwarz
Gary Lamar Silkknitter
Deloris Dorrene Snyder
John Phillip Supplee
Dennis Anthony Sysak
Rollin Howard Tillis
John Darel Weaver

BACHELOR OF BUSINESS ADMINISTRATION

Richard Leon Bach
Leo Joseph Boarts, Jr.
John Alvin Brodell
Edward Francis Capinski
Gerard Albert Cloutier
Earl Linwood Decker
James Ray Derstine

James Paul Keim
George Allerton Melick
Joseph Terrance Ring
Charles Ernest Straubel
James Harvey Sypher
David Gerald Train

BACHELOR OF ARTS

John Ogden Abernethy
Peter William Allen
James Clayton Alspach
Janet Anastasia
Rupak Bajracharya
Roger Nelson Baldwin
Robert Lee Battle, Jr.
M. Juanita Beslanovits
Joan Terry Billison
Philip Edmund Bohne
David Moyer Bowen

William Haywood Bromley
Frank Wayne Bronchello
Francis Xavier Buschman
Dennis Francis Calabrese
Janet Marie Carp
William Stephen Carr
Joseph James Catagnus, Jr.
Rebecca Ann Cipro
Gary Richard Clausen
Peter Carrigan Coleman
Michael Henry Compter

Gary Brooks Cosby
 Craig Hooper Crandall
 William James Creighton, Jr.
 Barbara Dando
 Doris Ethel Davidson
 James Stewart DeBow
 Deanne Farese Donia
 William Thomas Durdin
 William Arey Eubanks
 Alice Anne Fennell
 Eugene Joseph Frechette, III
 William Barry Fry
 David George Gates
 Kathy Louise Gerber
 Charles William Gibney
 Joan Teresa Ann Glaser
 Cathy Szilagyi Glass
 Frank Howard Goedeke
 Gerald John Green
 Judith Earle Grumet
 Paul Ivins Guest, Jr.
 James Douglas C. Guy, III
 Carol Gearhart Hackenbracht
 Margaret Emma Harbison
 Michael Alan Hartline
 Robert Hoke Hartzell
 Stephanie Miller Hauser
 Claude John Hawkins
 Ruth Miller Heckler
 Gail Louise Heinemeyer
 Thomas Robert Hendricks
 Theophilus Moore Holcombe, V
 Karen Jane Humphreys
 Douglas Oliver Hunter
 Robert Duncan Johnson
 Jonathan Charles Katz
 Marsha Michele King
 Elizabeth Anne Kissel
 Paul Edward Knettler
 Steven Mark Kron
 Linda Anne Kunz
 James J. Kutz
 Ronald Robert Lausch
 Anthony George Lombardo

Robert Walter Long
 Thomas Joseph Mack
 Gail Louise MacNeill
 Donna Lucille Mann
 Terry Walter Martin
 Bettie Mae Martinez
 Karen Bradley Mason
 David Chandler McCarty
 Sally Anne McCoach
 Wesley Sheppard McDowell
 John Joseph McKernan, Jr.
 David Richard Miller
 Richard Maynard Miller, Jr.
 Richard David Moody
 Mark Havens Morris
 Robert Alexander Mosakowski
 Joseph Glenn Muscara
 Selby Nera
 Michael Nikolic
 Nina Hardin Norris
 Bradley James Olsen
 Sally O'Neill
 Elizabeth Carol Orsburn
 John Kenneth Park
 Kenneth Elliott Parks
 Barbara Ann Pascavage
 Stephen Drewe Phinny
 Harvey Clark Pond, III
 Patricia Ann Pyle
 Donna Adele Rea
 Michael Barton Redmond
 Virginia Edna Rhoads
 Charles Frederick Rinck, III
 Elaine Hansen Rodgers
 Eugene Dennis Roth
 David Richard Ruff
 Lawrence Michael Rufo
 Suzanne Marie Sachs
 Gary George Schaal
 Beverly Susan Seel
 Kathy Anne Settler
 Arthur Glen Severance
 Robert Walter Shmihluk
 Jane Lisa Siegel

Jolan Fredda Silver
William Emmett Sitzler
Scott Alan Slingsby
Llewellyn Paul Smith
William Thomas Snavelly
Jane Elizabeth Snow
Daniel Newton Spencer
John Stewart, III
Richard Wales Swan, Jr.
Robert Samuel Swarr
Allen Edwin Tibbitts

Philip Mason Todd
John Francis Tourtellotte, Jr.
Kathi Lou Turney
Andrea Aldrich Vaughan
Barbara Jeanne Walker
Carol Lynn Wasserman
Shirley Ann Watson
Carolyn Joy Williams
Charles Wendell Williams
Robert Bayne Williams, III
Virginia Craig Williamson

BACHELOR OF SCIENCE

Patricia Lee Abernethy
James Hansell Adair
Larry Stephen Andrews
Jon Christy Baggs
Dora Law Bennett
Bruce Scott Bickel
Linda Arlene Bucher
Sandra Lee Caldwell
Steven James Callio
Robin Gale Cash
William Charles Castan, Jr.
John Scott Clayton
Terry Connell
Timothy Gerry Cousounis
Emily Ellen David
Marian Ruth Derr
George Edward Detwiler
Richard Allan Dixon
Aralene Baral Johnston Doan, II
Joan Elaine Dombrow
Richard Eugene Dougherty
Kenneth Kernan Dumm
Donna Elizabeth Dyroff
James Robert Eby
Christian James Eilers
Robert Paul Eilers
Trudie Jane Ellenberger
Susan Elizabeth Emerich
Kathleen Gray Emerson
Harry Lewis Eshbaugh

Susan Kay Esterly
Deborah Ellen Evans
John Julius Fioravanti, Jr.
Susan Florich
Anne Louise Fuhr
Theodore Michael Gilbert
Colleen Joy Gleason
Susan Cornell Gloninger
Gary Stephen Greenberg
Rosemary Hachadorian
Darlene Mae Hagerty
Theodore Gordon Hall, II
Alan Lloyd Hallman
Robert Samuel Hanlon
Linda Susan Hardy
William Kenneth Hildebrandt
Pamela Lynne Hitchcock
Robert Evan Houle
Christine Treiss Hunt
Mona Jean Jennings
George Burton Kaylor
Charles Harold Keeler
Chase Ernest Kneeland
Carol Louise Knight
James Richard Knipe, Jr.
Marcia Jean Knott
Donald Edward Larson, Jr.
Cynthia Ann Lee
Rosalie Ann Lockard
James Elbert Looney

Diane Marsh McClain
 Joseph Steven Meluzio
 Jenny Weston Michael
 Geraldine Lynn Miller
 Tom Frank Mitros
 Lisa Gail Montgomery
 Lynda Weckesser Murrow
 Wesley Richard Nieweg
 Harvey Bruce Passman
 Joan Lynn Patrick
 Ann Louise Paul
 Judith Louise Pennell
 Rosemary Elizabeth Petro
 Sandra Lee Pope
 Linda Lee Czapkewicz Price
 Linda Pritchard Andrews
 Wanda Colleen Raub
 Janice Irene Rauer
 Sylvia June Reese
 Lucinda Mae Reichenbach
 Rebecca Griesemer Reifsnyder
 Harriet Lynn Reynolds
 Barry Robert Ross
 Nicholas David Roush
 Michael Sabrick, Jr.
 Jane Newsom Sakaguchi

Robert Allen Scappa
 Ned William Schillow
 Anne Louise Schneck
 Mary Gertrude Schwenkler
 Julianna Esther Serdy
 Wayne Conrad Shaw
 Enzia Eileen Shrager
 Evelyn Virginia Sohl
 Lesa Marie Spacek
 Anthony Joseph Spagnola
 Kenneth LeRoy Speicher
 Ricke Lyle Spotts
 Beverly Jane Stehman
 James Randolph Stellar
 Sally Ann Stetler
 William Roy Steward
 John Gerald Stunkard
 Robyn Elaine Talley
 Stanley Lee Talley
 Eileen Helen Ternove
 Page Elizabeth Thomas
 David Ross Trishman
 Patricia Ann VanBlarcom
 Edna Ruth Williams
 Marsha Ann Wocklish
 Steven Henry Ziemer

ALUMNI ASSOCIATION

President — Walter Wm. Tropp, '34, Wayne Ave., Haddonfield, N. J. 08033

Vice-President — Mrs. Charles Dando, '45, 615 Bridle Rd., Glenside, Pa.

Secretary - Treasurer — Mrs. Ronald Lauchmen, '54, M.R. #1,
W. Prospect Ave., North Wales, Pa.

Alumni Director — Milton E. Detterline, Ursinus College, Collegeville, Pa.

ALUMNI REPRESENTATIVES

Joseph A. Citta, Esq., '30, P.O. Box 4, Toms River, N. J.

R. Blair Hunter, '35, 1020 Elmwood Drive, Pottstown, Pa. 19464

Mrs. Donald Ashenfelter, '48, RD #2, Collegeville, Pa. 19426

Mrs. Gary Newkirk, '65, Eighth Ave., Collegeville, Pa. 19426

Mr. Kenneth L. Schaefer, '70, 352 Main St., Collegeville, Pa.

FACULTY REPRESENTATIVES

Adele P. Boyd, '53, 113 E. Germantown Pike, Plymouth Meeting, Pa.

Bronwen Umberger Kram, '68, Myrin Library, Ursinus College,
Collegeville, Pa. 19426

ALUMNI DIRECTORS

Henry P. Laughlin, M.D., '38, 4401 East-West Hwy., Bethesda, Md.

Joseph T. Beardwood, III, '51, 620 Laverock Rd., Glenside, Pa.

William F. Heefner, Esq., '42, 250 N. Pennsylvania Ave., Morrisville, Pa.

Mrs. Alfred Taxis, '36, 1414 Powell St., Norristown, Pa.

E. Eugene Shelley, Esq., '37, 35 N. George St., York, Pa.

COLLEGE CALENDAR FOR 1973

January	2	Tuesday	Christmas Recess ends, 8:00 A.M.
January	16	Tuesday	Last day of classes
January	18	Thursday	First Semester examinations begin
January	27	Saturday	First Semester examinations end
January	29	Monday	Last day for filing financial aid applications
February	5	Monday	Second Semester begins, 8:00 A.M. Registration of New Students
March	23	Friday	Mid-Semester grades due, 4.00 P.M.
March	24	Saturday	Spring Recess begins, 1 P.M.
March	28	Wednesday	Mid-Semester grades mailed
April	2	Monday	Spring Recess ends, 8:00 A.M.
April	9	Monday	Pre-Registration begins
April	19	Thursday	Easter Recess begins, 5:30 P.M.
April	24	Tuesday	Easter Recess ends, 8:00 A.M.
May	22	Tuesday	Last day of classes
May	24	Thursday	Second Semester examinations begin
June	2	Saturday	Second Semester examinations end
June	2	Saturday	Alumni Day
June	3	Sunday	Baccalaureate Service, 10:00 A.M.
June	6	Wednesday	Commencement, 2:00 P.M. Summer School Begins, 8:00 A.M.
August	29	Wednesday	Summer School ends, 5:30 P.M.
Sept.	15	Saturday	Freshman Program begins, Academic Convocation, 4:00 P.M.
Sept.	17	Monday	Registration of New Students
Sept.	18	Tuesday	Second day of Registration
Sept.	19	Wednesday	First Semester begins, 8:00 A.M.
October	13	Saturday	Parent's Day
October	27	Saturday	Homecoming Day
November	4	Sunday	Founder's Day Convocation, 3:00 P.M.
November	5	Monday	Mid-Semester Grades submitted by Faculty, 9:00 A.M.
November	8	Thursday	Mid-Semester Grades mailed
November	21	Wednesday	Thanksgiving Recess begins, 5:30 P.M.
November	26	Monday	Thanksgiving Recess ends, 8:00 A.M.
December	15	Saturday	Christmas Recess begins, 1:00 P.M.

COLLEGE CALENDAR FOR 1974

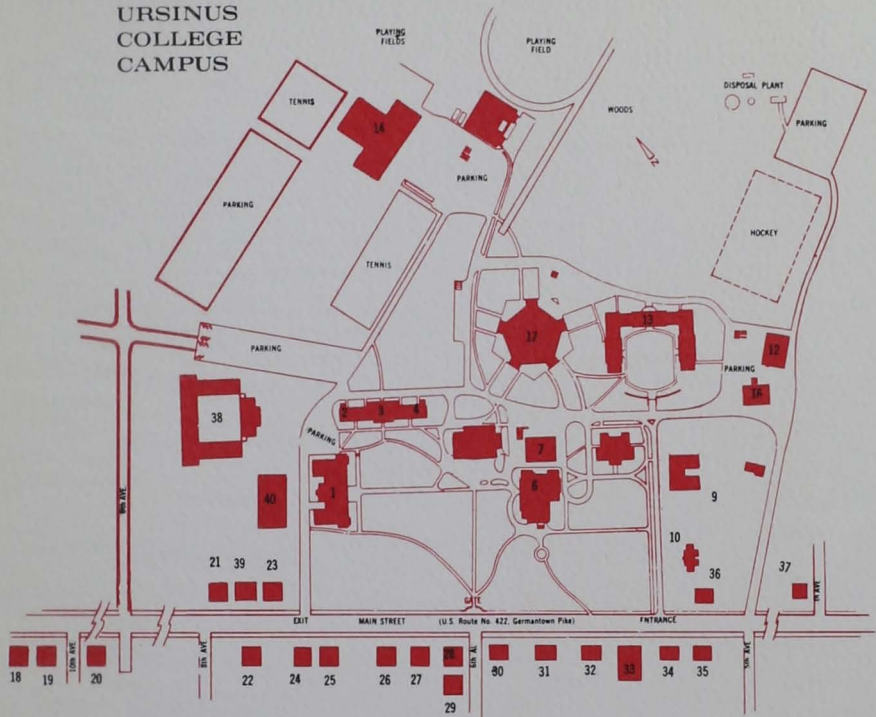
January	2	Wednesday	Christmas Recess ends, 8:00 A.M.
January	15	Tuesday	Last day of classes
January	17	Thursday	First Semester examinations begin
January	26	Saturday	First Semester examinations end
January	28	Monday	Last day for filing financial aid applications
February	4	Monday	Second Semester begins, 8:00 A.M. Registration of New Students
March	22	Friday	Mid-Semester grades due, 4:00 P.M.
March	23	Saturday	Spring Recess begins, 1 P.M.
March	27	Wednesday	Mid-Semester grades mailed
April	1	Monday	Spring Recess ends, 8:00 A.M.
April	8	Monday	Pre-Registration begins
April	11	Thursday	Easter Recess begins, 5:30 P.M.
April	16	Tuesday	Easter Recess ends, 8:00 A.M.
May	21	Tuesday	Last day of classes
May	23	Thursday	Second Semester examinations begin
June	1	Saturday	Second Semester examinations end
June	1	Saturday	Alumni Day
June	2	Sunday	Baccalaureate Service, 10:00 A.M.
June	2	Sunday	Commencement 2:00 P.M.
June	5	Wednesday	Summer School Begins, 8:00 A.M.
August	28	Wednesday	Summer School ends, 5:30 P.M.
Sept.	14	Saturday	Freshman Program begins, Academic Convocation 4:00 P.M.
Sept.	16	Monday	Registration of New Students
Sept.	17	Tuesday	Second day of Registration
Sept.	18	Wednesday	First Semester begins, 8:00 A.M.

INDEX

Absences	36	Engineering Program	19
Academic Council	128	Departmental Requirements	114
Acceleration	25	English, Courses in	63
Accreditation	7	Departmental Requirements	107
Administration	119	Evening School	22
Admission	17	Expenses	27
Admission, Notification of	21	Extra-curricular Activities	10
Advanced Standing and Placement ..	20	Faculty, 1972-1973	120
Advisers	34	Fees	27
List of	128	Financial Aid	30
Alternate Mathematics		Fine Arts, Course in	67
Departmental Requirements	109	Foreign Languages, Placement in	19
Alumni Association	136	Foreign Students	39
Astronomy, see Physics		Foreign Study, Junior Year	39
Athletics	10	French, Courses in	98
Bills	27	Departmental Requirements	111
Biology, Courses in	48	Geography, Courses in	67
Departmental Requirements	106	Geology, Courses in	68
Board Costs	27	Geometry, Descriptive, Courses in ..	57
Botany, see Biology		German, Courses in	68
Buildings and Grounds	12	Departmental Requirements	108
Bureau of Student Employment	31	Government, see Political Science ..	
Calendar, College, 1973-1974 ..	137, 138	Grades of Scholarship	36
Career Opportunities	22	Graduation	35
Centennial Scholarships	30	Requirements for	35
Chapter, The	38	Grants, Financial	31
Chemistry, Courses in	52	Greek, Courses in	56
Departmental Requirements	106	Departmental Requirements	107
Choice of Studies	35	Gymnasiums	13
Classical Languages, Courses in	56	Health & Physical Ed., Courses in ..	70
Departmental Requirements	107	Departmental Requirements	108
College Scholars' Program	44, 103	History, Courses in	74
Committees, Board of Directors	118	Departmental Requirements	109
Committees, Faculty	129	History of Ursinus	5
Complementary Program	46	Honors	38
Correspondence with the College ..	2	Awarded in 1972	130
Costs	27	Honors upon Entrance	30
Courses of Instruction	48	Insurance, Accident and Health	10
Degrees Awarded in 1972	130	Integrated Course in	
Degrees	37	Physical Sciences	103
Departmental Honors	45, 104	Interdepartmental Courses	46
Departmental Requirements	106	Junior Year Abroad	39
Development	7	Language Laboratories, use of	36
Directors, Board of	116	Latin, Courses in	56
Directory	116	Departmental Requirements	107
Dormitories	14	Library	13
Drafting, Courses in	57	Loans	32
Early Decision	19	Majors, Requirements for	106
Economics, Courses in	57	Map, Campus	Inside Back Cover
Departmental Requirements	107	Mathematics, Courses in	79
Education, Courses in	60	Departmental Requirements	109
Educational Program	34	Matriculation	17
Employment, Student, Bureau of	31	Meals	9

Medical Service and Insurance	9	Resident Heads	129
Music, Courses in	82	Resident Nurse	10
Private Instruction	28	Rooms and Meals	9
Notification of Admission	21	Romance Languages, Courses in	98
Nurse, Resident	10	Departmental Requirements	111
Officers of the Corporation (Board)	118	Scholarships	30
Officers, Faculty	128	Science Certification	112-114
Organizations	10	Sciences	
Part-Time Students	21	Concentration in Biology	112
Payments	27	Concentration in Chemistry	113
Philosophy, Courses in	84	Concentration in Physics	113
Departmental Requirements	110	Senior Symposium, Courses in	105
Physical Education Activities	10, 70	Sigma Xi, Society of the	38
Physician	9	Sociology, Courses in	102
Physics, Courses in	88	Spanish, Courses in	100
Departmental Requirements	110	Departmental Requirements	112
Pi Gamma Mu	39	Special Offerings	103
Pivotal Courses	43	Special Students	20
Placement Bureau	25	Store, College	14
Political Science, Courses in	92	Student Employment, Bureau of	31
Departmental Requirements	111	Summer School	21
Presidential Scholarships	31	Summer Reading Program	34
Principles, College	6	Swedish, Courses in	70
Prizes Awarded in 1972	129	Teaching, Requirements for	
Psychology, Courses in	94	Certification	61, 112-114
Departmental Requirements	111	Terms and Vacations	137
Publications	11	Transfer Students	20
Public Speaking, Courses in	97	Tuition	27
Radial Courses	44	Tuition Exchange Program	33
Registration	35	Ursinus Plan, The	41
Regulations	29	Vocations, preparation for	22
Religion, Courses in	84	Withdrawals	30
Departmental Requirements	110	Work-Study Program	31
Requirements, Admission	17	Worship, Public	9
Requirements, Graduation	35	Zoology, see Biology	

THE
URSINUS
COLLEGE
CAMPUS



KEY TO THE CAMPUS

- | | | |
|---|--|--|
| 1. Pfahler Hall of Science (laboratories, classrooms, Evening School) | 17. Wismer Hall (dining, theater, classrooms) | 28. Shreiner Hall, dormitory for women, 6th Avenue and Main Street |
| 2. Curtis Hall, dormitory for men | 18. Dormitory for women, 944 Main Street | 29. South Hall |
| 3. Wilkinson Hall, lounge and dormitory for men | 19. Dormitory for women, 942 Main Street | 30. Hobson Hall, dormitory for women, 568 Main Street |
| 4. Brodbeck Hall, dormitory for men | 20. Fircroft Hall, dormitory for men, 940 Main Street | 31. Fetterolf House, Faculty Offices, 554 Main Street |
| 5. Myrin Library | 21. Isenberg Hall, dormitory for men, 801 Main Street | 32. Super House, 542 Main Street |
| 6. Bomberger Memorial Hall | 22. Todd Hall, dormitory for women, 724 Main Street | 33. Trinity Church, United Church of Christ |
| 7. Post Office, Store and Snack Bar | 23. Omwake Hall, dormitory for men, 701 Main Street | 34. The Parsonage, 522 Main Street |
| 8. College Union | 24. Schaff Hall, dormitory for women, 646 Main Street | 35. Maples Hall, dormitory for men, 520 Main Street |
| 9. Administration Building (Admissions Office) | 25. Olevian Hall, dormitory for women, 640 Main Street | 36. Keigwin Hall, dormitory for women, 513 Main Street |
| 10. Studio Cottage | 26. Zwingli Hall, U.C.C. Conf. Hdq., 620 Main Street | 37. Clamer Hall, dormitory for women, 409 Main Street |
| 11. Infirmary | 27. Duryea Hall, dormitory for women, 612 Main Street | 38. Dormitory for men |
| 12. Maintenance Building | | 39. 777 Main Street, dormitory for women |
| 13. Paisley, Stauffer, Beardwood Halls, dormitories for women | | 40. Life Science Building |
| 14. D. L. Hellferich Hall and The William Elliott Pool | | |
| 15. Thompson-Gay Gymnasium | | |
| 16. Heating and Power Plant | | |