URSINUS COLLEGE BULLETIN
1969-1970
Volume 67/Number 1

1869 CENTENNIAL 1969
Ursinus College is located in Collegeville, a borough in Montgomery County, Pennsylvania, twenty-five miles northwest of Philadelphia. U. S. Route 422 and Pennsylvania State Highway 29 intersect at Collegeville. It may be reached from Philadelphia by means of Reading or Philadelphia and Western (69th Street Terminal) railroads to Norristown, Pennsylvania, from where buses leave for Collegeville.

Vol. LXVII
No. 1

URSINUS COLLEGE BULLETIN

Catalog Number January 1969

Entered as second class matter at the Post Office, Collegeville, Pa., under the Act of Aug. 24, 1912.
The Bulletin is published eight times a year with issues in January, February, March, June, August, September, November and December.
CORRESPONDENCE WITH URSINUS COLLEGE

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

GENERAL COLLEGE MATTERS
  The President

DEVELOPMENT
  Assistant to the President

PUBLICITY
  The Director of Public Relations

ACADEMIC STANDING OF STUDENTS AND REQUESTS FOR TRANSCRIPTS
  The Dean

ADMISSIONS
  The Dean of Admissions

FINANCIAL AID, STUDENT EMPLOYMENT
  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 Director of Student Employment

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
  The Alumni Secretary

The Post Office address is Collegeville, Pennsylvania, 19426

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

Visitors to the College are welcome. Student guides are available when the College is in session. The offices of the College are open Monday through Friday 9-12 and 1-5 and on Saturdays 9-12. The Office of Admissions will be closed on Saturdays from June 15 to Labor Day. Applicants for admission are expected to write for an appointment. Information regarding public transportation and highway routes to Collegeville will be found elsewhere in the Catalog.
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIS IS URSINUS</td>
<td>7</td>
</tr>
<tr>
<td>The College in Brief</td>
<td>7</td>
</tr>
<tr>
<td>STUDENT LIFE ON CAMPUS</td>
<td>11</td>
</tr>
<tr>
<td>The Campus Setting</td>
<td>15</td>
</tr>
<tr>
<td>ADMISSION</td>
<td>19</td>
</tr>
<tr>
<td>FINANCIAL INFORMATION</td>
<td>29</td>
</tr>
<tr>
<td>Tuition, Board, Fees</td>
<td>29</td>
</tr>
<tr>
<td>Scholarships and Financial Aid</td>
<td>32</td>
</tr>
<tr>
<td>EDUCATIONAL PROGRAM</td>
<td>35</td>
</tr>
<tr>
<td>THE URSINUS PLAN</td>
<td>41</td>
</tr>
<tr>
<td>COURSES OF INSTRUCTION</td>
<td>49</td>
</tr>
<tr>
<td>DEPARTMENTAL REQUIREMENTS</td>
<td>111</td>
</tr>
<tr>
<td>DIRECTORY</td>
<td>123</td>
</tr>
<tr>
<td>The Board of Directors</td>
<td>123</td>
</tr>
<tr>
<td>The Administration</td>
<td>125</td>
</tr>
<tr>
<td>The Faculty</td>
<td>126</td>
</tr>
<tr>
<td>The Administrative Staff</td>
<td>133</td>
</tr>
<tr>
<td>Prizes, Honors, Degrees, 1968</td>
<td>134</td>
</tr>
<tr>
<td>Alumni Association</td>
<td>139</td>
</tr>
<tr>
<td>College Calendar for 1969-1970</td>
<td>141</td>
</tr>
<tr>
<td>INDEX</td>
<td>143</td>
</tr>
</tbody>
</table>
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 100 years. It has about 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 faculty holds 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 decade, four major building projects have been completed. A new dormitory, to accommodate 252 men, was finished in early 1968, and five other buildings are planned for the next several years.

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.

CENTENNIAL CELEBRATION

"But Still Try, For Who Knows What Is Possible"... this quotation by Michael Faraday has become an Ursinus tradition. Carved in the archway of Pfhaler Hall, Faraday's words have provided an inspiration to legions of Ursinus students.

It is, therefore, fitting that these words should keynote the Ursinus Centennial Celebration, which will commence in June of 1969.
The Centennial year will see many changes and events on the campus, including the start of three new academic buildings. A group of important guest speakers will be on campus throughout the year to share their wisdom and knowledge with Ursinus. Centennial celebrations are planned and a memorable start to the second hundred years will become a reality.

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

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, and the American Chemical Society.

DEVELOPMENT

The Development Department of the College coordinates staff long-term planning, conducts the fund-raising program and administers public relations and alumni affairs. It is executing a ten-year development program for broad improvement in the physical plant and the academic program. The first phase of this program is the All-Ursinus Anniversary Drive, a capital campaign coinciding with the College's centennial celebration.
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

From time to time voluntary worship services are held on the campus.

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

MEDICAL SERVICE

The Comprehensive Fee paid by resident students entitles them to ordinary medical attention. The College Physician may be consulted in his office on the campus during office hours. He will regularly visit patients in the infirmaries. During the regular College sessions the resident nurses are on duty twenty-four hours a day. They care for the sick under the direction of the College Physician.

The College will not pay bills that students contract with hospitals or with physicians or nurses not on the staff of the College. The College reserves the right to enforce quarantine and to engage the services of special attendants if necessary, but will not be responsible for the compensation of extra physicians, nurses, or attendants, which compensation must be provided by the student or his parent or guardian.
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. Intercollegiate competition in football, basketball (varsity and junior varsity), soccer, wrestling, cross country, 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 inter-fraternity competition.

For women students, the College supports inter-collegiate 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. Allied religious and service groups are the Chi Alpha Society for those students planning to enter the ministry or other religious work, and the Canterbury Club.

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 English Club, the Spanish Club, the Pre-Legal Society, the Student National and Pennsylvania State Education Associations, 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. A chapter of the Honorary Social Studies Society, Pi Gamma Mu, has been established. 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.

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

The Debating Club each year holds intercollegiate and intramural debates on topics of national interest. Members may qualify for election to Tau Kappa Alpha, the national honorary debating fraternity.

Music plays a large part in the life at Ursinus. Choral music is represented by the Meistersingers, who offer concerts on and off campus, including a one-week tour in the spring; the Messiah Oratorio Chorus whose presentation of Handel’s Messiah during the Christmas season is one of the outstanding musical events of the year. Instrumental music is offered by the Concert and Marching Bands. There is a chapter of Pi Nu Epsilon, the national honorary musical fraternity.

The Agency of Ursinus College is a student-run and student-supported organization created for the purpose of bringing professional entertainment to the College.

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 three times 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.
Focus, an all-student publication, is a magazine which expresses the political opinions and ideas of students and faculty.

The Ursinus Bulletin, official publication of the College, appears eight times a year. In addition to the Catalog you are reading, it takes the form of three issues of The Alumni Journal, three issues of The Newsletter, and one issue of The Reports of Officers.

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.
STUDENT LIFE ON CAMPUS

THE CAMPUS SETTING

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

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

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

Pfahler Hall of Science, built in 1932, houses classrooms and laboratories for work in biology, chemistry, physics, mathematics, psychology, geology. Found here are the Levi Jay Hammond Laboratory of Comparative Anatomy, the W. Wayne Babcock Laboratory of General Biology, the Anna Heinly Schellhammer Laboratory, the Schellhammer Laboratory. The building is equipped with the Elihu Thomson Memorial Telescope for astronomical observation. Also in Pfahler Hall are the offices of the President and of the Evening School. The science building is named in honor of Dr. George E. Pfahler, famed radiologist.

The Alumni Memorial Library has more than 82,000 volumes, not counting government documents and pamphlets. It receives more than 550 periodicals and newspapers. The location of Ursinus College in the Philadelphia area makes available for special studies the considerable bibliographical holding of neighboring libraries through personal consultation or inter-library loan.

In 1964, the full set of Early American Imprints in microprint augmented Library holdings by the 42,000 items published in America up to 1800. These imprints, augmented by several recent and colonial newspapers on microfilm, constitute the nucleus of the Micro-form Section of the Library. In all, the Micro-form Section consists of 68,000 holdings.

Much of Ursinus's campus is given over to athletics and physical education. There is Patterson Field, named for the College's first benefactor, Robert Patterson, where varsity football is played and track and field meets are held. There is Price Field, made up of the soccer field, the baseball diamond, several softball diamonds and football practice ground. The field is named for Dr. John Price, '05, one of the great athletes in Ursinus history. There are the Tennis Courts, located at the rear of Curtis Dormitory. And there is the Effie Bryant Evans Hockey Field at the east end of campus near Stauffer Hall.
Two structures house facilities for the physical education program. Thomp­
son-Gay Gymnasium, built in 1927, doubles as a playing area and theatre, with
completely equipped stage. Portable seats are used for theatrical perform­
ances. 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. The College Gymnasium, erected in 1947, located near Thomp­
son-Gay Gym, seats 800 and is the scene of Ursinus's intercollegiate basketball
games.

One of the busiest buildings on campus is the College Store and Snack
Center, opposite Wismer Hall. The Center, open from early in the morning to
late at night, is the crossroad for student social life. Also in the building is the
College Post Office, maintained on campus for the convenience of students.

Other structures on campus include Superhouse, a residence on Main Street
opposite the campus, bequeathed to the College by the late Henry W. Super,
D.D., LL.D., Vice-President and Professor of Mathematics, 1870-1891, and
President, 1892-1893; Sprankle Hall, on the east campus fronting Fifth Avenue,
the infirmary; The Eger Gateway, erected through the generosity of George
P. Eger, of Reading, Pennsylvania, at the entrance of the walk leading from
Main Street to Freeland Hall; and The Power Plant, a strikingly modern build­
ing put into operation in 1963 which is equipped to supply the College's needs
even after the construction of the many buildings planned for the next several
years.
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; Zwingli Hall, 620 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.

New Men's Dormitory Complex, located on the north end of the campus, houses 252 men.

DORMITORIES FOR WOMEN

Paisley Hall, Stauffer Hall and Beardwood Hall are three dormitories for women. The buildings house 244 women and are located on the east campus behind the Alumni Memorial Library.

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. Guilliam H. Clamer, is a residence hall for twenty-five women.

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

942 Main Street and 944 Main Street are residence halls for 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.

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 only, providing:

1. The Maintenance Department has been notified in writing when to expect the shipment and from whom.
2. That the shipment arrives prepaid.
3. The Maintenance Department accepts 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 in English. It is recommended that applicants take the November or December Scholastic Aptitude Tests and three Achievement Tests in 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.

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 Algebra, One Unit
- Plane Geometry, One Unit
- 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 of 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 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 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 under 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.

SPECIAL STUDENTS

A limited number of applicants who are not candidates for degrees may be admitted as special students, provided 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. No advanced standing will be granted to a transfer student unless his previous college record is free of failures and conditions. 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. Courses will be 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 four 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.

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

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 specific courses.
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.
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 program emphasizes courses in business administration and in fields closely allied to business administration, such as economics, political science, history, English composition, public speaking and certain foreign languages.

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

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.

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 business 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.

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.

TEACHING. Work in education, including practice teaching, as required by many of the state departments of education, is offered to those who plan a career in education. Teacher preparation is limited to the secondary school field. Students follow curricula under the guidance of 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 acts as a clearing house for the placement of alumni seeking employment or new positions. Alumni are encouraged to place their names on the list of available candidates. A special electronic data placement service is available through the College’s membership in the College Placement Council.

Persons seeking placement in the educational field or in business or industry should address communications to the Director of Placement, Ursinus College, Collegeville, Pa.

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. Students 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 .................................................. $1600
- Room and Board ....................................... $1000
- Activities fee .......................................... $ 20

PAYMENTS ARE TO BE MADE AS FOLLOWS:

New Students
- Advance Payment—as requested .................. $ 100
- Breakage Deposit—As indicated on bill ........ $  20

Old Students
- Advance Payment—July 15 ......................... $ 100

All Students
- September—One-half annual charges, less credit for Advance Payment.
  One-half Activities Fee.
- January —One-half annual charges.
  One-half Activities Fee.

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.

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 $52.50 per semester hour.

Checks should be made payable to URSINUS COLLEGE.

29
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 variation in fee depends upon the location of the room.

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 covers subscription to the Ursinus Weekly, intercollegiate debating, the Christian Associations, the Ursinus College Forum, admission without charge to all athletic contests at the College and to College dances.

STUDENTS' MEDICAL INSURANCE PLAN. A twelve-month coverage for accident, sickness, and health is available at nominal cost. Further information is available in the Office of the Treasurer.

PRE-SESSION CAMP FOR WOMEN IN PHYSICAL EDUCATION. An instructional fee of $75 is charged for attendance at the Pre-Session Physical Education Camp. The College provides no facilities for Room and Board.

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 Room and Board charge 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. This fee also applies to students majoring in Psychology during the semester in which Psychology 10 is taken.

FINE ARTS FEE. A fee of $15 is charged for students enrolled in Fine Arts 3 & 4.

BREAKAGE DEPOSIT. A deposit of $10 is required of each new student to defray any expense incurred by injury to property and is included on the bill for the first term. The unexpended balance is returned upon graduation or withdrawal from 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 $1 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.

REGULATIONS

Bills for the Comprehensive Fee 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 the Comprehensive Fee 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 College in writing and settle all bills within thirty days or be liable to dishonorable dismissal.

The possession or use of alcoholic beverages or firearms on the campus or in Collegeville is forbidden.

Freshman and Sophomore resident students are prohibited from having an automobile in Collegeville and vicinity during the academic year. Junior and Senior resident students holding scholarships, financial grants, and positions under the Bureau of Student Employment are similarly restricted.

If a woman student marries, she at once forfeits her membership in the College. She may, however, apply for readmission.

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.
FINANCIAL AID OFFICE

The Financial Aid Office, in cooperation with the Office of Admissions, renders financial assistance to students. Some of the sources of aid are Centennial and Presidential Scholarships, financial grants, permanent scholarship funds, student employment, Federal Educational Opportunity grants, and student loans.

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 in amounts up to $1,000 to those students who have demonstrated outstanding leadership, services, 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.

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.
FINANCIAL INFORMATION

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 Renewal Parents' Confidential Statement (RPCS) to the College Scholarship Service. An RPCS 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. Information about these scholarships is available from the Financial Aid Officer.

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 three hundred and seventy dollars per year. Approximately two hundred positions, representing varying amounts of compensation and types of work, are now open to students.
A student who agrees to perform a specific task, such as serving in the dining room, has his account credited in advance of his work. If he is employed at an hourly rate, he may elect to be paid in cash on the bi-weekly payroll or to have his account credited at the end of his term of work. Inasmuch as bills for the Spring Term are prepared and mailed before the end of the Fall Term, a student who elects to have his pay credited to his account will have to have his bills adjusted at the opening of the Spring Term.

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

**FEDERAL EDUCATIONAL OPPORTUNITY GRANTS**

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

**STUDENT LOANS**

Loans are available to full-time Ursinus students under the Federal Guaranteed Loan Program outlined in the Higher Education Act of 1965. Each student may borrow up to $1,000 per year to a maximum of $7,500. If the family gross income is less than $15,000, the student pays no interest while in college. The federal government pays the interest until the student withdraws or is graduated, after which the student must arrange to repay the loan at 4% simple interest.

**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.
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 desires 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 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 in 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.)

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 registration of students 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 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, provided the student's average for the preceding term is eighty or higher. 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 desires 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. When class absence seems to be contributing to a student's unsatisfactory work, the instructor may warn the student and report the warning to the Dean of the College for possible remedial action. If a student incurs other absences in a course after being warned, he may be dropped from the course with a failing grade.
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 pages 111 to 121 and the catalog of the Evening School. Degrees are conferred only at convocations and candidates must present themselves in person.
The College may confer the honorary degrees of Doctor of Divinity, 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, Magna Cum Laude, and Cum Laude, are given only for unusual excellence in all the subjects pursued by the candidate.

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. Elections are held once a year, the nominations coming from the faculty members.

PRE-SEASON CAMP FOR WOMEN IN PHYSICAL EDUCATION
A camp is available on an optional basis for sophomore, junior, and senior women who are majoring in Physical Education. The camp is operated during a period of two weeks immediately preceding the opening of the fall term. Class instruction by regular members of the staff normally includes work in archery, canoeing, hockey, horseback riding, officiating, swimming, life-saving, and tennis. The time spent in camp activities will be deducted from the hours required in Physical Education activities. Courses 303 to 308, during the college year. See under Financial Information, Fees.
JUNIOR YEAR ABROAD

An Ursinus College Student may spend the Junior Year at a foreign university, provided that he has maintained a B average at Ursinus College and, in the opinion of the Dean and the Faculty, will be a worthy representative of his country. 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.

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.

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
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.

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.

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 and Juniors.

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 1, 2 and TWO FULL YEARS OF A FOREIGN LANGUAGE (to the 3, 4 level). 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 1, 2; 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 1, 8; ECONOMICS 3, 4; POLITICAL SCIENCE 1, 2; SOCIOLOGY 1, 2; 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 3, 4; CHEMISTRY 1, 2; PHYSICS 1, 2; GEOLOGY 1, 2; 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 107.
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 1969-70.

DEPARTMENTAL COURSES
(See Departmental Requirements for each major)

COLLEGE SCHOLARS’ PROGRAM

Qualified Freshmen in their second term, Sophomores, and Juniors may earn up to nine credits (not more than three per semester) by pursuing guided independent study as College Scholars.

1. The candidate must have achieved a minimum semester average of 85 during the semester immediately preceding.

2. The candidate must prepare a prospectus for the study he wishes to undertake and have his project approved by his adviser and by the College Scholars Committee of the faculty.

3. The candidate may fulfill his requirements for three credit hours of pivotal courses or up to nine credits of radial courses in the Divisions of his projects.

4. A College Scholar must pursue his work under the supervision of a Divisional Tutor and must participate in two seminar meetings per semester designed to bring him into contact with other College Scholars working in the same Division.
5. A College Scholar will be graded by the College Scholars Committee, which will assess the merits of his report on his work and give him an oral examination.

6. A Scholar may work for no more than one semester in the department of his academic major.

7. A Scholar who receives a passing grade for his study will receive three semester credits for each semester in which he is designated as a College Scholar. A grade lower than B will disqualify him for a subsequent semester.

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 recommendation from his adviser, in the Office of the Dean by May 1 preceding the Convocation at which the Departmental Honors are to be awarded.

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 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
- College Bowl

Humanities Division:
- English Club
- YM-YWCA
- Meistersingers
- Messiah Chorus
- Chapel Choir
- Ursinus College Band
- Curtain Club
- Ursinus Weekly Staff
- Lantern Staff
- Ruby Staff

Social Science Division:
- Economics Club
- International Relations Club
- Intercollegiate Conference on Government
- Focus Staff
- Psychology Club
- Pennsylvania State Education Association
- Men's Student Government Association
- Women's 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.
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

003—001. Introduction to Anthropology
Archeology, physical anthropology, and the nature of culture. Three hours per week. Three semester hours.

003—002. Introduction to Anthropology
Continuation of course 001. Three hours per week. Three semester hours.

005—BIOLOGY

PROFESSOR WAGNER
ASSOCIATE PROFESSOR HOWARD
ASSOCIATE PROFESSOR KRUSE
MRS. SHINEHOUSE

This Department aims, through the study of a number of fundamental aspects of Biology, to foster the scientific attitude in its students, to encourage an enthusiastic interest in the subject of Biology as a science, and to provide for its majors a background for graduate work in Biology and for professional preparation in the several fields of human and veterinary medicine and other health services. Also, the Department participates in offering a program for Teacher Certification in secondary schools, as described below.

Students majoring in Biology must take a minimum of 28 semester hours in Biology, including Biology 103, 104; 010; 019; 021 and 022. Additional electives are to be selected from Biology 005, 006, 017, 018, 020, 023, 024, 025, 031, 032. This department also requires its majors to take CMP267-001, 002 and, except for students in the teaching program, Chemistry 007, 008. Those planning to pursue graduate studies in Biology are advised to elect Mathematics 031 (Intermediate Calculus), and/or Mathematics 013, 014 (Statistics), and/or Mathematics 041 (Probability), preferably before their fourth year.

Teaching—This program (major in Science, concentration in Biology) is designed for prospective secondary school teachers whose principal interest is Biology and who wish to be certified in Biological Science, Science, and General Science.

49
The following courses are prescribed by the Department of Biology: Biology 103, 104; 005, 006, 017, 018, 010 or 019, 021, 022, CMP267-001, 002 and History 016.

The curriculum of students beyond the first year must be arranged in consultation with the head of the Department of Education. For sequence of courses, see Major in Science, Concentration in Biology, p. 118.

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: Chemistry 001, 002; Physics 001, 002; and Mathematics 029, 030. See p. 107.

005—003. General Biology (Zoology)

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—004. 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. Prerequisite by the consent of the instructor.

Courses 003 and 004 of General Biology are not open to Biology majors but may be taken by other students to satisfy the college requirements for graduation.

005—103. GENERAL BIOLOGY (ZOOLOGY)

DR. VAN DAM

A study of general principles of structure, function, and development of animal cells and organs and of representative animal types. Prerequisite, CMP267-001, 002. Two hours of lecture; two two-hour laboratory periods per week. Four semester hours.

005—104. GENERAL BIOLOGY (BOTANY)

DR. VAN DAM

A study of general principles of structure, function and development of plant cells and of representative plant types. Prerequisite, Biology 103. Two hours of lecture; two two-hour laboratory periods per week. Four semester hours.

Courses 103 and 104 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—005. *FIELD BIOLOGY, ANIMALS*  
DR. HOWARD

This course, given in the fall semester, studies the interrelationships among the fauna and flora to their environment as revealed in field investigations to selected forest, fresh-water and marine habitats. The role of particular faunal components of the total biota will be emphasized. The following principles and concepts are stressed: adaption, parasitism, population dynamics, the community, succession and energy relations. Prerequisite, Biology 003 or Biology 103. Two hours of lecture, one three-hour laboratory period per week. *Three semester hours.*

005—006. *FIELD BIOLOGY, PLANTS*  
DR. WAGNER

This course, given in the spring semester, attempts to pursue the study of the plant world in the local area stressing the principles of taxonomy, ecology and plant geography. Comprehensive collections of representative vascular plants will be made by each student. Prerequisite Biology 104. Two hours of lecture, one three-hour laboratory period per week. *Three semester hours.*

*Biology 006 is required for those who intend to apply for certification in Pennsylvania as teachers of biology and for pre-veterinarian students.*

005—010. *COMPARATIVE ANATOMY*  
DR. HOWARD

Comparative anatomy and phylogeny of the chordates, with emphasis on the vertebrates. Comparative laboratory dissections of shark, amphibian and mammal. One hour of lecture; two three-hour laboratory periods per week. Prerequisite, Biology 103. *Four semester hours.*

005—017. *HUMAN ANATOMY AND PHYSIOLOGY*  
MRS. SHINEHOUSE

A study of the structure, function and development of the muscular, skeletal, and nervous systems. One hour of lecture; one two-hour laboratory period per week. *Two semester hours.*

005—018. *HUMAN ANATOMY AND PHYSIOLOGY*  
MRS. SHINEHOUSE

A study of the structure, function, and development of internal and sense organs. Prerequisite, Biology 003 or 103. One hour of lecture; one two-hour laboratory period per week. *Two semester hours.*

005—019. *EMBRYOLOGY*  
DR. KRUSE

Gametogenesis, early development, histogenesis and organogenesis of selected animal types, especially the chick, pig, and human. Prerequisites, Biology 103, 104. One hour of lecture; two three-hour laboratory periods per week. *Four semester hours.*
005—020. **HISTOLOGY**  
DR. KRUSE

Structural and developmental study of tissues and organs of the vertebrate body. Introduction to histological technique. Prerequisite, Biology 103, 104. One hour of lecture; two three-hour laboratory periods per week. *Four semester hours.*

005—021. **HEREDITY**  
DR. WAGNER

Lectures and discussion dealing with the principles of plant and animal genetics, and the consideration of factors pertaining to human inheritance. Assigned readings and papers. Prerequisite, Biology 003, 004 or 103, 104. Three hours per week. *Three semester hours.*

005—022. **EVOLUTION**  
DR. WAGNER

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 and reports concerned with selected phases of biological knowledge. Topics to be chosen by the instructor in charge. Prerequisites, Biology 010 or 019. Chemistry 007, 008. Open to fourth-year majors in biology. One hour per week. *One semester hour.*

005—024. **SEMINAR**  
STAFF

A continuation of Biology 023. Prerequisites, Biology 010, or 019 or 020; Chemistry 007, 008. Open to fourth-year majors in biology. One hour per week. *One semester hour.*

005—025. **GENERAL PHYSIOLOGY**  
DR. VAN DAM

A study of physical-chemical aspects of cellular processes, and principles of related experimental techniques. Prerequisites, Biology 103, 104; Chemistry 007, 008. Two hours of lecture; one four-hour laboratory period per week. *Four semester hours.* Enrollment is limited to 15 students in each term. A minimum enrollment of six students is required for course to be offered.

*005—026. **GENERAL PHYSIOLOGY**  
DR. VAN DAM

A continuation of Biology 025. Prerequisite, Biology 025. Two hours of lecture; one four-hour laboratory period per week. *Four semester hours.*

*This course is not offered in 1969-1970.*
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. Prerequisites, Biology 103, 104. Two hours of lecture per week, two hours of laboratory. 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. Prerequisites, Chemistry 007, 008. Two hours of lecture per week, two hours of laboratory. Three semester hours.

010—CHEMISTRY

PROFESSOR STAIGER
ASSISTANT PROFESSOR BARTH

PROFESSOR PETTIT
ASSISTANT PROFESSOR SCHULTZ

ASSOCIATE PROFESSOR KRUSE
ASSISTANT PROFESSOR HESS

MRS. BICKING

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 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

This program 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 003, 004; German 003, 004. The following are recommended as electives: Chemistry 005, 012, 021, 030; Physics 007, 008; German 011, 012.
II. Healing Arts

This program is designed for degree-seeking students planning for admission to professional schools in the healing arts (medicine, dentistry, osteopathy, veterinary medicine, etc.) who are specializing in Chemistry in college.

The following courses are prescribed: CMP267-001, 002; Chemistry 003, 007, 008, 009, 010; Biology 103, 104; Mathematics 031.

III. Teaching

This program (major in Science, concentration in Chemistry) is designed for prospective secondary school teachers whose principal interest is Chemistry and who wish to be certified in Physical Science, Science, and General Science.

The following courses are prescribed by the Department of Chemistry: CMP267-001, 002; Biology 003, 004; Chemistry 003, 007, 008, 009, 010 or 011, 012. History 016; Physics 011, 012. 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 requirement for the following combination of courses: Chemistry 001, 002; Physics 001, 002; and Mathematics 029, 030. See p. 107.

010—001. GENERAL CHEMISTRY

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 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 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

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, quantitative organic analysis and electrochemistry. 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**  
DEAN PETTIT AND 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**  
DEAN PETTIT AND 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.*
010—011. THE IDENTIFICATION OF ORGANIC COMPOUNDS  
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—021. THE LITERATURE OF CHEMISTRY  
STAFF

The use of books, journals, and reports in the field of chemistry. Open to third and fourth year students. Prerequisites, Chemistry 008, German 004. One hour per week. One semester hour.

010—022. SEMINAR IN ORGANIC CHEMISTRY  
DR. HESS

Reports on recent advances in Organic Chemistry. One hour per week. Prerequisite, Chemistry 008. One semester hour.

010—023. SEMINAR IN PHYSICAL CHEMISTRY  
DR. SCHULTZ

Paper and reports in Physical Chemistry. One hour per week. Prerequisite, Chemistry 010. One semester hour.

010—030. RESEARCH  
STAFF

Laboratory and library work with a final report. Students admitted to the course must follow the requirements for admission to Departmental Honors. Satisfactory completion of the course may result in awarding Departmental Honors. The laboratory work will be equivalent to three hours of work per week and will be conducted during the seventh and eighth semesters. Three semester hours.
COURSES OF INSTRUCTION

010—032. BIOCHEMISTRY

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

PROFESSOR DONALD BAKER

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

Three hours per week. Three semester hours.

Greek 001 may be elected by students in any major field.

016—002. INTERMEDIATE GREEK

Three hours per week. Three semester hours.

Prerequisite, Greek 001 or its equivalent.

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

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**

DR. BAKER

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**

DR. BAKER

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

017—Latin

017—001. **ELEMENTARY LATIN**

DR. BAKER

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**

DR. BAKER

*Three semester hours.*

017—003, 004. **OVID, VIRGIL**

DR. BAKER

Each *three semester hours.*
Prerequisite, Latin 002 or its equivalent.

017—005, 006, 007, 008, 009, 010, 011, 012. **ADVANCED LATIN**

DR. BAKER

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. Each of them carries *three semester hours* credit.
Prerequisite, Latin 004 or its equivalent.

018—DRAFTING AND DESCRIPTIVE GEOMETRY

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. Six hours laboratory per week. Prerequisite, Drafting 001. Three semester hours.

020—ECONOMICS

PROFESSOR HUNTER
ASSISTANT PROFESSOR RAFETTO
ASSISTANT PROFESSOR SYMONS
MR. TAMBRINO

The work in the Economics Department is designed to give (1) a knowledge of economic philosophy; (2) a knowledge of the structure and functioning of our economy; (3) a suitable background for those who wish to enter business, government, or graduate school.

Students majoring in the department must take a minimum of thirty (30) semester hours of work in the department, including Courses 003, 004, 016, 021, 026, and 027. In addition, the following courses are required: History 001, 002; Mathematics 001, 002; Mathematics 013, 014; Philosophy 103 or 104 (a, b, or c) or 106; Political Science 001, 002; and Psychology 001. It is recommended that those students intending to do graduate work in economics or business administration also take Economics 011, 012, and 033; and Mathematics 029, 030.

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. Three hours per week. Three semester hours. Prerequisite, Economics 003.

020—005. LABOR ECONOMICS

MR. RAFETTO

Labor marketing with emphasis on employment and wage problems, economic security, and collective bargaining, including an appraisal of public policy. Prerequisite, Economics 003, 004. Three hours per week. Three semester hours.

*020—006. CORPORATION FINANCE

MR. TAMBRINO

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.

*This course is not offered in 1970-1971.
***This course is not offered in 1969-1970.
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
MR. TAMBRINO
Introduction to principles and procedures underlying the periodic determination of income and of financial position; emphasis is directed toward the function of communication. Three hours per week. Three semester hours.

020—012. ACCOUNTING PRINCIPLES
MR. TAMBRINO
Principles and procedures required for the accumulation and classification of data for managerial control and for financial analysis. Prerequisite, Economics 011. Three hours per week. Three semester hours.

020—013. PUBLIC FINANCE AND TAXATION
MR. SYMONS

020—015. BUSINESS LAW
MR. TAMBRINO
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. Prerequisite, Economics 003, 004. Three hours per week. Three semester hours.

***This course is not offered in 1969-1970.
COURSES OF INSTRUCTION

**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. INDUSTRIAL ORGANIZATION AND MANAGEMENT  MR. RAFETTO**

Historical development of modern management practices. Principles and problems of organization, standardization, motivation, and control. Three hours per week. Three semester hours.

**020—021. HISTORY OF ECONOMIC THOUGHT  MR. RAFETTO**

Development of systematic economic thinking from early Mercantilism through the Physiocrat, Classical and Neo-Classical schools. Contrasts the thought, policy, and practices of the past with the present. Prerequisite, Economics 003, 004. Three hours per week. Three semester hours.

**020—026. INTERMEDIATE ECONOMICS I (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. INTERMEDIATE ECONOMICS II (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. RAFETTO**

Analysis of the Capitalist, Socialist, Communist, Fascist and cooperative economic systems. Economic policies and problems of the United Kingdom, U.S.S.R., Communist China, Yugoslavia, and India are reviewed. Prerequisite, Economics 003, 004. Three hours per week. Three semester hours.

**020—030. SEMINAR IN ECONOMICS  STAFF**

Preparation, presentation, and discussion of reports on selected topics in the field of economics. Open to fourth year departmental majors. One hour per week. One semester hour.

"This course is not offered in 1971-1972."
020—031. **INTERMEDIATE ACCOUNTING**  
MR. TAMBRINO

An intensive study of recording and reporting for units of economic activity with emphasis directed to the establishment of controls through the use of forecasts, budgets and standard costs, and to the problems of asset valuation. Prerequisite, Economics 011, 012. Three hours per week. *Three semester hours.*

020—032. **INTERMEDIATE ACCOUNTING**  
MR. TAMBRINO

A continuation of the previous course, dealing with problems involving corporate capital, cost accounting, techniques, and the analysis of financial data for decision-making purposes. Prerequisite, Economics 031. Three hours per week. *Three semester hours.*

*020—033. **ECONOMETRICS**  
STAFF

Mathematical formulation, measurement, and testing of economic concepts. Static and dynamic models; demand, supply, cost, production, consumption, liquidity preference functions; elasticity and marginal concepts; profit and utility maximization. Prerequisites: Economics 003, 004; Mathematics 001, 002; Mathematics 013, 014. Three hours per week. *Three semester hours.*

**020—034. **ECONOMIC DEVELOPMENT**  
DR. HUNTER


**025—EDUCATION**

ASSOCIATE PROFESSOR LEIGHT  
VISITING PROFESSOR LISSFELT

VISITING PROFESSOR WESSEL  
PROFESSOR RIDGE

PROFESSOR FLETCHER  
VISITING PROFESSOR SELTZER

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 formulate appropriate philosophies of education for establishing schools in that society; (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

*This course is not offered in 1970-1971.

**This course is not offered in 1971-1972.
acquainted with acceptable practices in the schools; (6) to develop the skills necessary for a beginning teacher. 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. 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 school 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 1969 will have a full semester of professional courses. The following courses will be given in that semester: Education 041, 043, 005 and 044.

The following program of studies is required by all students seeking certification in secondary school teaching. This program should fulfill certification requirements for Pennsylvania and surrounding states:

Second year, 2nd semester, Education 002; Third year, Education 031, 032; 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. LEIGHT, MR. LISSFELT

The characteristics of teaching as a profession; organization and characteristics of American education; analysis of the school as a social institution and of its relationships to the community it serves. Three hours per week. Three semester hours.

025—005. STUDENT TEACHING AND PRACTICUM DR. WESSEL, DR. LEIGHT, MR. LISSFELT, MR. SELTZER

A laboratory course consisting of observation and student teaching. Supervision is provided by the Department of Education in cooperation with supervising 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 weekly while the student teaching program is in progress, dealing with the analysis of classroom instructional practices and the responsibilities of a beginning teacher. This course is open only to fourth-year students who meet the personality and academic requirements. Fall semester. Prerequisites, Ed. 002, 031, 032, 041, 043. Eight semester hours.
025—009. *EDUCATIONAL AND PSYCHOLOGICAL TESTS AND MEASUREMENTS*  
**DR. FLETCHER**

An introductory survey of the field of measurement in education, including measurement of intelligence and school results; main features of the technique of testing and test construction; types of tests and scales; evaluation; interpretation; use. Prerequisite, Education 031, 032, and Psychology 001. Three hours per week. *Three semester hours.* *(Same course as Psychology 009).*

025—031. *EDUCATIONAL PSYCHOLOGY: GROWTH AND DEVELOPMENT*  
**DR. FLETCHER, DR. RIDGE**

The nature of growth. The dynamics of personality development. The characteristics of physical, mental, emotional and social growth from the prenatal period until old age. The development of attitudes, interests and values. The ideal of an integrated personality. *(Same course as Psychology 031).* Prerequisite, Psychology 001. Three hours per week. *Three semester hours.*

025—032. *EDUCATIONAL PSYCHOLOGY: LEARNING AND TEACHING*  
**DR. FLETCHER, DR. RIDGE**

The role of the teacher as a professional person. Basic learning theory needed by teachers. The nature and conditions of learning. The development of learning units. Individual differences in mental ability and their educational implications. Mental hygiene in the classroom. *(Same course as Psychology 032).* Prerequisite, Psychology 001. Three hours per week. *Three semester hours.*

025—034. *SEMINAR IN SECONDARY EDUCATION*  
**DR. LEIGHT**

A study of a selected topic, such as those drawn from curriculum or guidance, which is relevant to secondary education. Two hours per week. *Two semester hours.*

025—041. *ORIENTATION TO EDUCATIONAL PRACTICE AND METHODOLOGY*  
**DR. LEIGHT, DR. WESSEL**

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:
COURSES OF INSTRUCTION

(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. LEIGHT, MR. SELTZER

A study of the historical and philosophical foundations of American education; problems of contemporary education and their potential implications for the secondary school teacher. Three hours per week. Three semester hours.

Complete statements of the various requirements for certification in each subject matter area, for both Pennsylvania and New Jersey, are obtainable at the office of the head of the department of Education.

ENGLISH

PROFESSOR YOST  ASSISTANT PROFESSOR BYERLY
PROFESSOR STOREY  MR. RICHTER
PROFESSOR DONALD BAKER  MR. EHRlich
VISITING PROFESSOR BLACK  MRS. PORITZ
VISITING PROFESSOR WILLIAMS  MR. WILSON
ASSOCIATE PROFESSOR DOLMAN
ASSOCIATE PROFESSOR JONES

This department offers instruction in the knowledge and use of the English language, a study based on the premise that language is the indispensable tool in the life and labor of civilized man and is the art through which he most fully expresses his spirit. Its courses in literature provide opportunity to form an extensive acquaintance with English and American literature and to understand individual works as unique artistic creations and as products of a historical and social process. The ultimate aim is to implant a discriminating appreciation for the best that has been written in our civilization.

Students majoring in English must take the following courses: English Literature 003, 004; 009, 010; 013 or 014; 019, 020; and nine additional semester hours in English; History 009, 010 or 011, 012; 013, 014.

English majors are required in the senior year to pass comprehensive examinations in English and American literature to complete departmental requirements.

Students preparing for graduate study in English should elect French and German as their modern languages. Study in classical languages is strongly recommended for such students.
031—Composition

031—001. FIRST-YEAR COMPOSITION

Dr. Storey and 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

Dr. Storey and 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—007. ADVANCED COMPOSITION

Mr. Dolman

A course in descriptive writing and an introduction to the various creative forms used in Composition 008. 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 neo-classical era. Special attention is given to the social background. Three hours per week. *Three semester hours.*

*This course is not offered in 1969-1970.*
032—004. SURVEY OF ENGLISH LITERATURE

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

Literature 003, 004 are prescribed for second-year students majoring in English and are elective for second-year students in other major fields.

032—005. ENGLISH LITERATURE FROM 1660 TO 1740

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

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

A study of the poetry of Tennyson and his contemporaries. Three hours per week. Three semester hours.

Literature 007 is elective for third-year and fourth-year students.

032—008. ENGLISH POETRY, 1824-1890

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

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

032—010. SHAKESPEARE

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 prescribed for students majoring in English and are elective for third-year and fourth-year students in other major fields.

032—013. HISTORY OF THE ENGLISH LANGUAGE

A survey of the development of the English language from Anglo-Saxon to modern American English. Three hours per week. Three semester hours.
032—014. **ADVANCED GRAMMAR**  
DR. BYERLY

A study of historical grammar and linguistics. Three hours per week. *Three semester hours.*  
Literature 013 or Literature 014 is prescribed for second-year or third-year students majoring in English.

032—015. **MODERN POETRY**  
DR. WILLIAMS

English poetry from 1890 to the present. Two hours per week. *Two semester hours.*  
Literature 015 is elective for all students.

032—019. **AMERICAN LITERATURE**  
DR. WILLIAMS

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

032—020. **AMERICAN LITERATURE**  
DR. WILLIAMS

American literature from the Civil War to the present. Prerequisite, Literature 019. Three hours per week. *Three semester hours.*  
Literature 019 and 020 are prescribed for students majoring in English and are elective for second-year, third-year and fourth-year students in other major fields.

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

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.*

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**

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**

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**

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**

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.* (Alternates with 035.)

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

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.* (Alternates with 036.)

Literature 033 and 034 need not be taken consecutively.

032—035. **MODERN DRAMA**

A reading and discussion course in European and American dramatists, movements, and genres from Ibsen to O'Neill, Rice and Anderson. Prerequisite, English Composition 001. Three hours per week. *Three semester hours.*

*This course is not offered in 1969-1970.*
032—036. MODERN DRAMA
MR. EHRLICH
A reading and discussion course in contemporary European dramatists, movements, and genres since World War II. Prerequisite, English Composition 001. Three hours per week. Three semester hours.
Literature 035 and 036 are offered in alternate years.

032—040. SENIOR SEMINAR
STAFF
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.

080—FINE ARTS

080—001. APPRECIATION OF THE FINE ARTS
STAFF
An integrated study of the visual, audio and performing arts. Three hours per week. Three semester hours.

080—002. APPRECIATION OF THE FINE ARTS
STAFF
A continuation of Fine Arts 001. Prerequisite, Fine Arts 001. Three hours per week. Three semester hours.

080—003. PAINTING AND THE PLASTIC ARTS
MR. SORENSEN
Theory of painting and the plastic arts. Prerequisite, Fine Arts 001, 002, or History 027 and 028. Three hours per week. Three semester hours.

080—004. PAINTING AND THE PLASTIC ARTS
MR. SORENSEN
A continuation of Fine Arts 003. Prerequisite, Fine Arts 001, 002 or History 027, 028. Three hours per week. Three semester hours.
See also History 027, 028, History of Art.

034—GEOGRAPHY

034—001. 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.
COURSES OF INSTRUCTION

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 work 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 AND SLAVIC LANGUAGES

PROFESSOR HARTZELL  MR. GEIGER
PROFESSOR RICE  MR. CAFFREY

The Department of Germanic and Slavic 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 the following courses: German 005, 006, 007, 008, 009, 010; and 013-014; 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

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

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

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

The works of Klopstock & Lessing are studied. Three hours per week. Three semester hours.

*035—008. SEMINAR IN LITERATURE OF THE EIGHTEENTH CENTURY

The works of Goethe & Schiller are studied. Three hours per week. Three semester hours.

035—009. SEMINAR IN LITERATURE OF THE NINETEENTH CENTURY

Authors studied include Kleist, Hebbel, Grillparzer. Three hours per week. Three semester hours.

035—010. SEMINAR IN LITERATURE OF THE TWENTIETH CENTURY

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

*035—011. SCIENTIFIC GERMAN

Reading of texts in scientific fields. Special attention is given to techniques of translation. Two hours per week. Two semester hours.

*This course is not offered in 1969-1970.
*035—012. SCIENTIFIC GERMAN

Continuation of German 011. Readings in scientific journals, or original scientific works. Individual consultations. Two hours per week. Two semester hours.

035—013. WRITING AND SPEAKING GERMAN

Practice in the oral elements of the language; written composition. Three hours per week, plus three periods per week of laboratory. Three semester hours.

035—014. WRITING AND SPEAKING GERMAN

Continuation of German 013. Increased emphasis upon speaking German. Three hours per week, plus three periods per week of laboratory. Three semester hours.

036—Swedish

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

036—001. SWEDISH FOR BEGINNERS

Grammar, easy reading and composition. Lectures on cultural background. Three hours per week. Three semester hours.

036—002. INTERMEDIATE SWEDISH

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

Readings in Swedish literature, including selections from Danish and Norwegian. Three hours per week. Three semester hours.

*036—004. ADVANCED SWEDISH

Continuation of Swedish 003. Three hours per week. Three semester hours.

089—Russian

089—001. ELEMENTARY RUSSIAN

Grammar, conversation, reading. Three hours per week. Three semester hours.

*This course is not offered in 1969-1970.
089—002. ELEMENTARY RUSSIAN  
MR. CAFFREY

Continuation of Russian 001. Emphasis upon reading and conversation. Three hours per week. *Three semester hours.*

089—003. INTERMEDIATE RUSSIAN  
MR. CAFFREY

Grammar review, reading, conversation. Three hours per week. *Three semester hours.*

089—004. INTERMEDIATE RUSSIAN  
MR. CAFFREY

Continuation of Russian 003. Emphasis upon reading and conversation. Three hours per week. *Three semester hours.*

**GREEK**

*See under Classical Languages*

**040—HEALTH AND PHYSICAL EDUCATION**

PROFESSOR BAILEY  
ASSISTANT PROFESSOR WHATLEY

PROFESSOR SNELL  
ASSISTANT PROFESSOR BOYD

ASSOCIATE PROFESSOR GURZYNSKI  
MR. VIDEON

MRS. POLEY

The Health and Physical Education Department serves dual functions: (1) to provide for all students a diversified Service Program of activities, and (2) to offer to those students interested in majoring in the field, a comprehensive Professional Program in Health and Physical Education leading to teaching certification in these areas.

Included in the Service Program are the required two-hour freshman classes in basic activities, the optional organized intramural programs for men and women, and the provision of recreational facilities 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 003, 004; 017, 018; Psychology 001, 008. Students preparing for teaching also must take prescribed education courses.
COURSES OF INSTRUCTION

Service Courses

MR. WHATLEY, MISS BOYD, MR. VIDEON, MRS. POLEY

040—101, 102. A basic course offering a variety of seasonal games and skills. Its aims are to develop basic skills, improve physical fitness, provide enjoyment and relaxation and to develop recreational and social competence through participation in stimulating activities. This course is a requirement for graduation for all students except those majoring in physical education and must be completed in the first year. Two hours per week. Not a credit course.

Professional Courses

Health and Physical Education

040—031. PRINCIPLES AND HISTORY OF PHYSICAL EDUCATION
MISS SNELL

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 SNELL

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

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 AND CARE AND PREVENTION OF ATHLETIC INJURIES  
MISS BOYD
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. PRINCIPLES AND METHODS OF TEACHING PHYSICAL EDUCATION  
MISS SNELL
Principles, methods, and problems of teaching physical educational activities at the elementary and secondary school levels, lesson planning, unit and curriculum construction. Open only to physical education majors or students who have completed six hours in Education. Two hours per week. Two semester hours.

040—056. METHODS OF HEALTH INSTRUCTION  
MISS SNELL
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—057. PRINCIPLES AND METHODS OF COACHING AND OFFICIATING  
MISS SNELL, MR. WHATLEY, AND STAFF
This course is designed with particular reference to the needs of prospective coaches and officials. Opportunities are given for practice in coaching and officiating. Two hours per week. Two semester hours.
COURSES OF INSTRUCTION

04-058. PRINCIPLES AND METHODS OF COACHING AND OFFICIATING
MISS SNELL, MR. GURZYNSKI, AND STAFF

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

04-061. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION
MR. GURZYNSKI

This course aims to familiarize the student with the nature, function and history of specific tools of measurement in the field of physical education and to give him working knowledge and experience in the use of essential statistical procedures. Three hours per week. Three semester hours.

04-062. ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION
MR. BAILEY

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

04-064. CORRECTIVE AND ADAPTIVE PHYSICAL EDUCATION
MR. GURZYNSKI

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.

04-004. 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

04-301, 302. FIRST YEAR ACTIVITIES

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, and body mechanics.

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

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

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, riding, tennis, lacrosse, canoeing, badminton, boxing, wrestling, swimming, apparatus.

*WOMEN:* Archery, golf, riding, tennis, lacrosse, canoeing, badminton, swimming, modern dance, apparatus.

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.*

*NOTE:* Sophomore, junior, and senior women may attend a pre-session camp which offers activities in partial fulfillment of these requirements.

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.
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.

045—001. EUROPEAN CIVILIZATION

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

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

045—003. MEDIEVAL INSTITUTIONS

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

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

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  
MISS 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 hour per week. Three semester hours.

045—009. ENGLAND AND THE BRITISH EMPIRE  
MISS 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  
MISS 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  
MISS 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  
MISS 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

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.

*This course is not offered in 1969-1970.
045-014. **THE UNITED STATES OF AMERICA**

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**

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**

Economic foundations and social change in the United States with intensive study of Pennsylvania. Four-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.**

*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.**

045-017. **LATIN AMERICA**

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**

A continuation of History 017. Three hours per week. **Three semester hours.** (Alternates with 024.)

045-019. **GREEK HISTORY**

Studies in the political, social, and economic life in Ancient Greece. Two hours per week. **Two semester hours.**

045-020. **ROMAN HISTORY**

This course deals especially with the government of the Roman Republic, the transition to Empire, and the causes of its decline. Two hours per week. **Two semester hours.**

*This course is not offered in 1969-1970.*
*045—021. THE MIDDLE EAST

Mr. Davis

The ancient civilizations of Egypt, Babylonia, Persia, Greece, and the Byzantine Empire. The Moslem World and the Middle East in modern times. Three hours per week. Three semester hours.

*045—022. THE MIDDLE EAST

Mr. Davis

Prerequisite, History 021. A continuation of History 021. Three hours per week. Three semester hours.

*045—023. THE FAR EAST

Dr. E. H. 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. E. H. 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.

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. Sorenson

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. Sorenson

A continuation of History 027. Prerequisite, History 027. Three hours per week. Three semester hours.

*This course is not offered in 1969-1970.
COURSES OF INSTRUCTION

045—029. SEMINAR IN THE HISTORY OF EUROPE, OR ASIA, OR AFRICA  
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—030. SEMINAR IN THE HISTORY OF ASIA, OR AFRICA, OR EUROPE  
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  
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  
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 for 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.

LATIN

See under Classical Languages

050—MATHEMATICS

PROFESSOR DENNIS  
ASSOCIATE PROFESSOR LEWIS

ASSOCIATE PROFESSOR SCHULTZ  
MR. 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: Chemistry 001, 002; Physics 001, 002; and Mathematics 029, 030. See p. 107.

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 — 035, 036, 037, 038, 041, 042. For those preparing to take post-graduate work — 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 — 032, 035, 036, 039, 040, 041, 042.

050—001. FUNDAMENTALS OF MODERN MATHEMATICS
DR. LEWIS
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
DR. LEWIS
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
A continuation of Mathematics 013, correlation, analysis of variance, and methods of testing hypotheses. Two hours per week. Two semester hours. Prerequisite, Mathematics 013.

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.
COURSES OF INSTRUCTION

050—030. ANALYTIC GEOMETRY AND CALCULUS
DR. DENNIS
A continuation of Mathematics 029, with applications to the fields of chemistry and physics. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 029.

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. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 030.

050—032. DIFFERENTIAL EQUATIONS
MR. BREMILLER
A study of the methods of solving types of ordinary differential equations with applications to problems in the physical sciences. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 031.

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. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 033.

050—035. MODERN ALGEBRA
DR. DENNIS
An introduction to the modern mathematical systems of groups, integral domains, rings, and ideals, fields, and vector spaces. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 034.

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. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 035.

050—037. MODERN GEOMETRY
MR. BREMILLER
A study of modern Euclidean geometry of the triangle and circle; inversion and polar reciprocation, isometry and similarity in Euclidean spaces, coordinate geometry, linear transformations and invariant theory. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 034.
050—038. MODERN GEOMETRY  
MR. BREMILLER

A continuation of Mathematics 037, with emphasis on affine geometry, projective geometry, non-Euclidean geometry, differential geometry of curves and surfaces; and an introduction to topology. Three hours per week. *Three semester hours.*

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. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 031.

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. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 039.

050—041. PROBABILITY  
DR. LEWIS

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

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. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 001 and 041.

*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.*

*This course is not offered in 1969-1970.*
050—045. FUNCTIONS OF A COMPLEX VARIABLE

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. Three hours per week. *Three semester hours.* Prerequisite, Mathematics 039, or simultaneously with Mathematics 039.

055—MUSIC

PROFESSOR PHILIP MISS SPANGLER

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. ELEMENTARY HARMONY

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

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

B. APPRECIATION OF MUSIC

055—013. APPRECIATION OF MUSIC

This course covers the early development of music through religious music, folk song and folk dance, and follows their progress to the larger forms of musical composition. Two hours per week. *Two semester hours.*

055—014. APPRECIATION OF MUSIC

A continuation of Music 013. The further development of music is traced into the symphonic and operatic fields of composition. Prerequisite, Music 013. Two hours per week. *Two semester hours.*
C. HISTORY OF MUSIC

055—015. HISTORY OF MUSIC  DR. PHILIP
Introduction to choral and instrumental music of the ancient and medieval period. Two hours per week. Two semester hours.

055—016. HISTORY OF MUSIC  DR. PHILIP
A continuation of Music 015. This course deals with the music of the Eighteenth Century, the Romantic period, and the Twentieth Century, Prerequisite, Music 015. Two hours per week. Two semester hours.

055—017. OPERA AND ORCHESTRAL MUSIC  DR. PHILIP
A detailed analysis of symphonic music. Two hours per week. Two semester hours.

055—018. OPERA AND ORCHESTRAL MUSIC  DR. PHILIP
A detailed analysis of proven operatic compositions. Two hours per week. Two semester hours.

055—019. MUSIC DRAMAS OF RICHARD WAGNER  DR. PHILIP
An intimate discussion and the detailed analysis of Wagner’s works. Two hours per week. Two semester hours.
Music 019 alternates with Music 017, 018.

D. MUSICAL ORGANIZATION

055—021a, 022a. BAND
Participation in the marching and the concert band. Two hours per week. Not a credit course.

055—021b, 022b. BAND
Second year. Continuation of first-year work. Two hours per week. Not a credit course.

055—021c, 022c. BAND
Third year. Continuation of second-year work. Two hours per week. Not a credit course.

055—021d, 022d. BAND
Fourth year. Continuation of third-year work. Two hours per week. Not a credit course.

*This course is not offered in 1969-1970.
055—027a, 028a. VOCAL ENSEMBLE AND METHODS
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. Two hours per week. Not a credit course but a prerequisite for Music 027b, 028b.

055—027b, 028b. VOCAL ENSEMBLE AND METHODS
Second year. Continuation of first-year work. Two hours per week. Credit of one semester hour to be awarded at the conclusion of the year.

055—027c, 028c. VOCAL ENSEMBLE AND METHODS
Third year. Concentration of second-year work. Two hours per week. Credit of one semester hour to be awarded at conclusion of the year.

055—027d, 028d. VOCAL ENSEMBLE AND METHODS
Fourth year. Continuation of third-year work. Two hours per week. Not a credit course.
Not more than twelve semester hours in Music may be counted toward graduation.

060—PHILOSOPHY AND RELIGION
PROFESSOR WILLIAMSON ASSISTANT PROFESSOR DAVID BAKER
ASSOCIATE PROFESSOR CREAGER MR. HARDMAN
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 in Philosophy are open to third-year and fourth-year students with the exception of Courses 101 and 102. Courses 101 and 102 are open also to second-year students, and are designed for students who do not plan to elect specialized courses in Philosophy. Although Religion courses are open to all students, normally they are taken by third-year and fourth-year students.

Students majoring in Philosophy and Religion are given (1) a comprehensive review of the fundamental subject matter of both disciplines, (2) an introduction to several derivative disciplines through their pursuit of an Area of Concentration in related fields, and (3) an opportunity to integrate their understanding of Philosophy and Religion by means of a Senior Seminar and a Comprehensive Examination.
Majors must take Philosophy 101, 102, 103, 104, 106 and 107; Religion 001 and 002; and Philosophy and Religion 109, 110. In addition, they may choose between Religion 006 or 008 and History 004, and between Philosophy 105 and History 027, 028. 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 — English 021; History 019, 020; Greek 001-008; Latin 001-012
B — History 027, 028; English 015, 017, 018; Music 013, 014, 015-019; Fine Arts 001, 002
C — Mathematics 001, 002, 029, 030; Music 001, 002; Psychology 032; English 013, 014, 022
D — Psychology 040; Sociology 001, 002, Political Science 007, 010; Economics 021; Biology 022

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
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
A survey of developing reflective thought in the Western World, beginning with Descartes and including several representative contemporary 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. MODERN PHILOSOPHICAL PROBLEMS       DR. WILLIAMSON
A study of certain problems outlined in Course 060—103 and inherent in a specific philosophy of nineteenth or twentieth-century origin. As in Course 060—103, intensive use is made of primary sources.
Three hours per week. Three semester hours.

*This course is not offered in the Spring term of 1970.
COURSES OF INSTRUCTION

060—105. ETHICS
DR. WILLIAMSON

A study of the principles of moral judgment, with exposition and criticism of the more important theories concerning the basic distinction between right and wrong conduct; the various problems of theoretical and practical ethics. Three hours per week. Three semester hours.

060—106. LOGIC
DR. WILLIAMSON

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—107. PHILOSOPHY OF RELIGION
DR. CREAGER, DR. BAKER

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. Offered in both terms. Three hours per week. Three semester hours.

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
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. Two hours per week. Two semester hours.

060—110. SENIOR SEMINAR: CURRENT ISSUES AND MOVEMENTS IN PHILOSOPHY
STAFF

A study of contemporary thinkers and schools of thought in Philosophy, making use of lectures, discussions, research papers, etc. Course 109 is open only to majors in the field of Philosophy and Religion. Two hours per week. Two semester hours.

*This course is not offered in the Spring term of 1970.
060—111. SEMINAR IN BRITISH PHILOSOPHY
A summer program of three weeks study at an English College. A British philosopher or theologian will be lecturer of the week, along with formal and informal conferences, and cultural visits will also be arranged.
Two hours per day. Two semester hours.

060—001. INTRODUCTION TO THE LITERATURE OF THE BIBLE: OLD TESTAMENT  MR. HARDMAN
An appreciative and historical study of the Bible, with a view to discovering its origin, nature, and significance in the life of today.
Three hours per week. Three semester hours.

060—002. INTRODUCTION TO THE LITERATURE OF THE BIBLE: NEW TESTAMENT  MR. HARDMAN
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 008.)

*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. Three hours per week. Three semester hours. (Alternates with 006.)

065—PHYSICS

PROFESSOR HEILEMANN  ASSOCIATE PROFESSOR SNYDER†
ASSISTANT PROFESSOR MARSTELLER  VISITING PROFESSOR ANAND

The courses in Physics are designed to furnish the student with a groundwork of as much of the material of Physics as time will permit. 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.

*This course is not offered in the Spring term of 1970.
†On leave 1968-69.
Students majoring in Physics must take the following courses: CMP267-001, 002; Physics 003, 004, 005, 006, 007, 008; Mathematics 031, 032, 039, 040, 043, 045.

Students majoring in Physics who are preparing to teach in secondary schools may substitute courses in Education for the following courses: Physics 007, 008; 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: Chemistry 001, 002; Physics 001, 002; and Mathematics 029, 030. See p. 107.

065--001. GENERAL PHYSICS DR. HEILEMANN, 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 DR. HEILEMANN, 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 course. 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: STATICS AND DYNAMICS DR. HEILEMANN

Plane and space force systems; concurrent forces; moments; center of gravity; friction; motion; curvilinear motion; projectiles; D'Alembert's Principle; moment of inertia; equilibrium of a rigid body; kinematics; Newton's Laws; work and energy; harmonic motion; rotation about a fixed axis; torsion pendulum; compound pendulum; coupled systems. Prerequisite, Mathematics 029 and 030. Three hours lecture and three hours laboratory per week. Four semester hours.

065--004. ELECTRICITY AND MAGNETISM DR. SNYDER

Gauss's Theorum; potential; capacity; electric and magnetic circuit; Kirchhoff's Laws; inductance; alternating currents; electrical machinery; elements of electronics. Prerequisite, Mathematics 029 and 030. 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—006. SOUND
DR. HEILEMANN
The nature of sound, the physical basis of music, speech, and hearing; acoustics of buildings; methods of sound transmission and reproduction, and study of distortion; diffraction and interference; applications. Three hours lecture and three hours laboratory per week. Four semester hours.

065—007. MODERN PHYSICS
DR. SNYDER
The elementary charged particles; electromagnetic radiation; waves and particles; elementary theory of the hydrogen atom; atomic spectra and electron distribution; natural radioactivity; nuclear disintegration; nuclear energy. Prerequisite, Mathematics 031. Three hour 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. SNYDER
Continuation of Course 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—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.
COURSES OF INSTRUCTION

065—014. ALTERNATING CURRENTS
DR. SNYDER
Capacitative and self-inductive circuits; mutual induction; the alternating-current circuit; alternating-current power and power factor; divided circuits; application of complex numbers; electromagnetic waves. Prerequisites, Physics 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; vector and tensor analysis, differential equations, LaGrange's equations, LaPlace transforms, Fourier analysis, boundary value problems for the diffusion equation, heat flow equation, wave equation, calculus of variations. Prerequisites, Physics 001, 002, 003, 004; Mathematics 029, 030. Mathematics 039, 040 and 043 although not prerequisites should be pursued concurrently. Two hours per week. Two semester hours.

065—016. ELEMENTS OF MATHEMATICAL PHYSICS
DR. SNYDER
Continuation of prerequisite Course 015. Two hours per week. Two semester hours.

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—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

Continuation of Course 065—209. Two semester hours.

065—312. INTRODUCTORY ASTROPHYSICS

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.

070—POLITICAL SCIENCE

PROFESSOR E. H. MILLER
ASSISTANT PROFESSOR CRAFT

PROFESSOR PANCOAST
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 examination of both the domestic civil service and the foreign service.

In addition to Political Science 001, 002, students majoring in Political Science must take course 005, 006; ten semester hours in elective Political Science courses; History 001, 002; History 013, 014; Economics 003, 004; Psychology 001 and Sociology 001, 002.

It is recommended that Political Science 001, 002 be taken in the first year, Political Science 005, 006 and Economics 003, 004 in the second year and Sociology 001, 002 and History 013, 014 in the third year.

070—001. AMERICAN GOVERNMENT

An analysis of the structure and functions of American national and state governments. Three hours per week. Three semester hours.

070—002. AMERICAN GOVERNMENT

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 govern-
ment. 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 con-
sidered 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 Eng-
land 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,
Italy, Russia and Japan. Three hours per week. Three semester hours.

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 prop-
erty rights. Three hours per week. Three semester hours.

070—009. PUBLIC ADMINISTRATION  DR. PANCOAST
A survey of the field of public administration, emphasizing administrative organiza-
tion, fiscal management and personal 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  
Basic theory, principles and functioning of the states in the world community. Three hours per week. Three semester hours.

070—012. INTERNATIONAL RELATIONS  
Continuation of Political Science 070—011. Three hours per week. Three semester hours.

*070—013. INTERNATIONAL LAW  
An introductory course in the Law of Nations. Case studies are stressed. Three hours per week. Three semester hours.

*070—014. INTERNATIONAL LAW  
Continuation of International Law 013. Three hours per week. Three semester hours.

070—015. METHODS OF POLITICAL ANALYSIS  
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. Repeated in second semester.

070—017. SEMINAR IN AMERICAN GOVERNMENT  
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  
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  
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.

*This course is not offered in 1969-1970.
COURSES OF INSTRUCTION

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 RIDGE

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 for all, and Abnormal Psychology and Mental Hygiene for many, 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, which is based on a broad foundation in social science and the biological sciences.

Students majoring in Psychology must take the following courses: Biology 003, 021, 022; Mathematics 001, 002, 013, 014; Economics 003, 004; Political Science 001, 002 and Sociology 001, 002; Psychology 001, 008, 009, 010, 012, 031, 032, 040 and 044. Students who plan to continue the study by 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.

075—001. ELEMENTARY PSYCHOLOGY  MR. SHARP

An introductory study of mental life and accompanying types of human behavior. Three hours per week. Psychology 001 is a prerequisite for all other psychology courses. Three semester hours.

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

075—008. MENTAL HEALTH AND ABNORMAL PSYCHOLOGY  DR. FLETCHER, DR. RIDGE

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 psychoneuroses 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, Course 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 education, including measurement of intelligence and school results; main features of the technique of testing and test construction; types of tests and scales; evaluation; interpretation; use. Prerequisite, Psychology 031, 032. Prerequisite, Psychology 001. Three hours per week. Three semester hours. *(The same course as Education 009.)*

075—010. ELEMENTARY EXPERIMENTAL PSYCHOLOGY  
DR. RIDGE, MR. SHARP
This course is designed to acquaint the student with laboratory techniques used in psychology. Limited to and required of all majors in psychology. Lectures, demonstrations, individual experiments and the preparation of scientific reports. Prerequisite, Psychology 001. Three hours lecture and two hours laboratory. Four 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, Course 001; Mathematics 013, 014. Three hours per week. Three semester hours.

075—031. EDUCATIONAL PSYCHOLOGY—GROWTH AND DEVELOPMENT  
DR. FLETCHER, DR. RIDGE
The nature of growth. The dynamics of personality development. The characteristics of physical, mental, emotional and social growth from the prenatal period until old age. The development of attitudes, interests and values. The ideal of an integrated personality. *(The same course as Education 031.)* Prerequisite, Psychology 001. Three hours per week. Three semester hours.

075—032. EDUCATIONAL PSYCHOLOGY—LEARNING AND TEACHING  
DR. FLETCHER, DR. RIDGE, MR. SHARP
The role of the teacher as a professional person. The basic learning theory needed by teachers. The nature and conditions of learning. The development of learning units. Individual differences in mental ability and their educational implications. Mental hygiene in the classroom. *(The same course as Education 032.)* Prerequisite, Psychology 001. Three hours per week. Three semester hours.
COURSES OF INSTRUCTION

075-040. SOCIAL PSYCHOLOGY  
DR. RIDGE

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 and 032. Three hours per week. Three semester hours.

075-014. SENSATION AND PERCEPTION  
MR. SHARP

The nature of the fundamental sensory processes will be exposed with emphasis on vision and audition. Theory and experiments bearing on significant perceptual phenomena will be surveyed from both physiological and experiential viewpoints. Prerequisite, Psychology 001. Three hours per week. Three semester hours. Psychology 042 for Psychology Majors.

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

MR. EHRLICH
MR. VANNUCCHI

077—001. PUBLIC SPEAKING  
MR. EHRLICH

The 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  
MR. EHRLICH

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

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

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

077—005. DEBATING AND RESEARCH

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.

077—006. DEBATING AND RESEARCH

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

ROMANCE LANGUAGES

ASSOCIATE PROFESSOR VORRATH
PROFESSOR GARRETT
MRS. LUCAS

MR. RAPPOCCIO
MR. VANNUCCHI
MRS. APFELBAUM

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.
086—001. ELEMENTARY FRENCH
Three hours per week. Three semester hours.

086-002. ELEMENTARY FRENCH
Prerequisite: French 001. Three hours per week. Three semester hours.

086—003. INTERMEDIATE FRENCH
Prerequisite: French 002 or equivalent (i.e., satisfactory completion of two years of French in secondary school). Three hours per week. Three semester hours.

086—004. INTERMEDIATE FRENCH
Prerequisite: French 003. Three hours per week. Three semester hours.

086—005. SURVEY OF FRENCH CIVILIZATION AND LITERATURE
The development of French life, arts and literature from the Middle Ages to the Revolution. Tapes and slides showing French cultural life from origin to modern time. Three hours per week. Three semester hours.

086—006. SURVEY OF FRENCH CIVILIZATION AND LITERATURE
A continuation of French 005; from 1789 to the present. Three hours per week. Three semester hours.

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

086—022. RABELAIS, THE PLEIADE, MONTAIGNE
Two hours per week. Two semester hours.

*086—023. CORNIELLE, RACINE, MOLIERE
Two hours per week. Two semester hours.

*086—024. THE ENLIGHTENMENT
Three hours per week. Three semester hours. French 021 and 022 alternate with French 023 and 024.

*This course is not offered in 1969-1970.
086—011. SEMINAR IN FRENCH LITERATURE, 1800-1860  MRS. APFELBAUM
Three hours per week. *Three semester hours.*

086—012. SEMINAR IN FRENCH LITERATURE, 1860-1890  MRS. APFELBAUM
Prerequisite: French 011. Three hours per week. *Three semester hours.*

*086—013. SEMINAR IN FRENCH LITERATURE, 1890-1914  MRS. APFELBAUM
Three hours per week. *Three semester hours.*

*086—014. SEMINAR IN FRENCH LITERATURE, 1914 TO THE PRESENT  MRS. APFELBAUM
Prerequisite: French 013. Three hours per week. *Three semester hours.*
French 011 and 012 alternate with French 013 and 014.

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

086—016. ADVANCED COMPOSITION AND CONVERSATION  MR. VANNUCCHI AND MRS. LUCAS
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.

088—001. ELEMENTARY SPANISH  STAFF
Three hours per week. *Three semester hours.*

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

*This course is not offered in 1969-1970.*
088-003. INTERMEDIATE SPANISH
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
Prerequisite, Spanish 003. Three hours per week. Three semester hours.

*088-009. SPANISH-AMERICAN LITERATURE THROUGH THE TWENTIETH CENTURY
Prerequisite, Spanish 014 or permission of the instructor. Two hours per week. Two semester hours.

*088-010. SPANISH-AMERICAN LITERATURE OF THE TWENTIETH CENTURY
Prerequisite, Spanish 014 or permission of the instructor. Two hours per week. Two semester hours.

Spanish 009 and 010 alternate with Spanish 121 and 122.

088-013. ADVANCED COMPOSITION AND CONVERSATION
Three hours per week. Three semester hours.

088-014. ADVANCED COMPOSITION AND CONVERSATION
Three hours per week. Three semester hours.

088-121. SPANISH THEATRE SINCE 1800
Prerequisite, Spanish 014 or permission of the instructor. Three hours per week. Three semester hours.

088-122. SPANISH PROSE SINCE 1800
Prerequisite, Spanish 014 or permission of the instructor. Three hours per week. Three semester hours.

*088-123. THEATRE OF THE SIGLO DE ORO
Prerequisite, Spanish 014 or permission of the instructor. Three hours per week. Three semester hours.

*This course is not offered in 1969-1970.
**088—124. PROSE OF THE SIGLO DE ORO**

Dr. Vorrath

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

Spanish 123 and 124 alternate with Spanish 125 and 126.

**088—125. SPANISH LYRIC POETRY**

Dr. Vorrath

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

**088—126. MEDIEVAL SPANISH LITERATURE**

Dr. Vorrath

Prerequisite, Spanish 009, 010, 121, 122, 123, 124, 125 or permission of the instructor. Two hours per week. *Two semester hours.*

**088—128. ADVANCED GRAMMAR**

Dr. Vorrath

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.*

**090—SOCIOLOGY**

Mrs. Ida MacDuffee Downing

**090—001. INTRODUCTION TO SOCIOLOGY**

Mrs. Downing

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**

Mrs. Downing

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

*This course is not offered in 1969-1970.*
COURSES OF INSTRUCTION

SWEDISH
See under Germanic Languages

SPECIAL OFFERINGS

COLLEGE SCHOLARS’ PROGRAM
Guided independent study for qualified 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. FERGUSON AND DIVISIONAL TUTORS

204. HUMANITIES
DR. FERGUSON AND DIVISIONAL TUTORS

205. SOCIAL SCIENCES
DR. ZUCKER AND DIVISIONAL TUTORS

206. SOCIAL SCIENCES
DR. ZUCKER AND DIVISIONAL TUTORS

207. NATURAL AND PHYSICAL SCIENCES
DR. HOWARD AND DIVISIONAL TUTORS

208. NATURAL AND PHYSICAL SCIENCES
DR. HOWARD 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, analytical 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 math­
ematical 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 content 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 subse­
quent 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 mathe­
matics, 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.
(See the Ursinus Plan for details.) *Three semester hours.*

005—150. **BIOLOGY** PROJECT ADVISER

010—150. **CHEMISTRY** PROJECT ADVISER

016—150. **GREEK** PROJECT ADVISER

017—150. **LATIN** PROJECT ADVISER
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Department</th>
<th>Credits</th>
<th>Project Adviser</th>
</tr>
</thead>
<tbody>
<tr>
<td>020-150</td>
<td>Economics</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>032-150</td>
<td>English Literature</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>035-150</td>
<td>German</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>040-150</td>
<td>Health and Physical Education</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>045-150</td>
<td>History</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>050-150</td>
<td>Mathematics</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>060-150</td>
<td>Philosophy-Religion</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>065-150</td>
<td>Physics</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>070-150</td>
<td>Political Science</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>075-150</td>
<td>Psychology</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>086-150</td>
<td>French</td>
<td>0-150</td>
<td></td>
</tr>
<tr>
<td>088-150</td>
<td>Spanish</td>
<td>0-150</td>
<td></td>
</tr>
</tbody>
</table>

**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 a 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

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

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

Critical reading of selected representative works from Western literature. Three hours per week. *Three semester hours.*

030—002. WESTERN LITERATURE

A continuation of World Literature 001. Prerequisite, Course 001. Three hours per week. *Three semester hours.*

030—003. NON-WESTERN LITERATURE

Critical reading of selected representative works from non-Western literature. Three hours per week. *Three semester hours.*

030—004. NON-WESTERN LITERATURE

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.
# DEPARTMENTAL REQUIREMENTS

## CLASSICS (B.A.)
**Adviser—Professor Baker**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English Composition 001, 002</strong></td>
<td><strong>Social Science</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>History 001, 002</strong></td>
<td><strong>Science</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Greek 001, 002</strong></td>
<td><strong>Greek 003, 004</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Latin 001, 002 or 003, 004 or 005, 006</strong></td>
<td><strong>Latin</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Elective</strong></td>
<td><strong>Electives</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Physical Education 101, 102</strong></td>
<td>****</td>
</tr>
<tr>
<td><strong>30</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Fourth Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Latin or Greek</strong></td>
<td><strong>Greek 007</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td><strong>Latin or Greek</strong></td>
</tr>
<tr>
<td><strong>24</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>30</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

## ENGLISH (B.A.)
**Adviser—Professor Yost**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English Composition 001, 002</strong></td>
<td><strong>English Literature 003, 004</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Humanities</strong></td>
<td><strong>English Literature 013 or 014</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td><strong>History</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Foreign Languages</strong></td>
<td><strong>Foreign Language (if not completed)</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Social Science</strong></td>
<td><strong>Radial Courses</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Physical Education 101, 102</strong></td>
<td><strong>Electives</strong></td>
</tr>
<tr>
<td><strong>30</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Fourth Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English Literature 009, 010 or 019, 020</strong></td>
<td><strong>English Literature 019, 020 or 009, 010</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>History</strong></td>
<td><strong>Electives</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>24</strong></td>
</tr>
<tr>
<td><strong>Radial Courses</strong></td>
<td><strong>30</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>30</strong></td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td>****</td>
</tr>
<tr>
<td><strong>12</strong></td>
<td><strong>30</strong></td>
</tr>
<tr>
<td><strong>30</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>
### ECONOMICS (B.A.)
**Adviser—Professor Hunter**

#### First Year
- English Composition 001, 002: 6
- History 001, 002: 6
- Science: 6
- Foreign Language: 6
- Economics 003, 004: 6
- Physical Education 101, 102: 6

**Total:** 30

#### Second Year
- Foreign Language 003, 004 (if not completed): 6
- Psychology 001: 3
- Mathematics 001, 002: 6
- Economics 021, 016: 6
- Electives: 9

**Total:** 30

#### Third Year
- Philosophy 103 or 104 or 106: 3
- Political Science 001, 002: 6
- Mathematics 013, 014: 4
- Economics 027, 026: 6
- Other Economics: 3
- Electives: 8

**Total:** 30

#### Fourth Year
- Economics: 9
- (any courses)
- Electives: 21

**Total:** 21

### 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: 6

**Total:** 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

**Total:** 30

#### Third Year
- German 005, 006 (if not completed): 6
- German 007, 008 or 009, 010: 6
- German 013, 014: 6
- Electives: 16

**Total:** 34

#### Fourth Year
- German 009, 010 or 007, 008: 6
- German 013, 014: 6
- Philosophy: 6
- Electives: 16

**Total:** 34

---

112
# DEPARTMENTAL REQUIREMENTS

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

**Adviser—Professor Bailey**

### First Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition 001, 002</td>
<td>6</td>
</tr>
<tr>
<td>History 001, 002</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>6</td>
</tr>
<tr>
<td>Biology 003, 004</td>
<td>6</td>
</tr>
<tr>
<td>Physical Education 031, 032</td>
<td>6</td>
</tr>
<tr>
<td>Physical Education 301, 302</td>
<td>4</td>
</tr>
</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Language (if not completed)</td>
<td>6</td>
</tr>
<tr>
<td>Biology 017, 018</td>
<td>4</td>
</tr>
<tr>
<td>Education 002</td>
<td>3</td>
</tr>
<tr>
<td>Education 031</td>
<td>3</td>
</tr>
<tr>
<td>Education 032</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 043</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 303, 304</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 001</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 044</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

---

### Third Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 051, 052</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education 054</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education 055, 056</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education 057, 058</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education 061</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 305, 306</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>11</td>
</tr>
</tbody>
</table>

### Fourth Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 005</td>
<td>8</td>
</tr>
<tr>
<td>Education 044</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 062</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education 064</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 307, 308</td>
<td>2</td>
</tr>
<tr>
<td>Psychology 008</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>7</td>
</tr>
</tbody>
</table>

---

## PHILOSOPHY AND RELIGION (B.A.)

**Adviser—Professor Hinkle**

### First Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition 001, 002</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>6</td>
</tr>
<tr>
<td>Science</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Philosophy 101, 102</td>
<td>6</td>
</tr>
<tr>
<td>Physical Education 101, 102</td>
<td></td>
</tr>
</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Language (003, 004)</td>
<td>6</td>
</tr>
<tr>
<td>(if not completed)</td>
<td></td>
</tr>
<tr>
<td>Religion 001, 002</td>
<td>6</td>
</tr>
<tr>
<td>Radial Courses</td>
<td>12</td>
</tr>
<tr>
<td>Electives in Area of Concentration</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

### Third Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy 103, 104</td>
<td>6</td>
</tr>
<tr>
<td>Philosophy 107</td>
<td>3</td>
</tr>
<tr>
<td>Religion 004 or 006, or History 004</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 105 or History 027, 028</td>
<td>3 or 6</td>
</tr>
<tr>
<td>Electives in Area of Concentration</td>
<td>.6 or 9</td>
</tr>
<tr>
<td>Electives</td>
<td>.6 or 9</td>
</tr>
</tbody>
</table>

### Fourth Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy 106</td>
<td>3</td>
</tr>
<tr>
<td>Senior Seminar (109, 110)</td>
<td>4</td>
</tr>
<tr>
<td>Electives in Area of Concentration</td>
<td>.3 or 6</td>
</tr>
<tr>
<td>Electives</td>
<td>17 or 20</td>
</tr>
</tbody>
</table>

---

113
# 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 ........... —

  **Total:** 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

  **Total:** 30

- **Third Year**
  - Radial Courses ............................ 6
  - Mathematics ................................ 9
  - Electives ................................... 15

  **Total:** 30

- **Fourth Year**
  - Mathematics ................................ 6
  - Radial Courses ............................. 6
  - Electives ................................... 22

  **Total:** 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 ........... —

  **Total:** 30

- **Second Year**
  - Foreign Language 003, 004 (if not completed) ................. 6
  - Humanities ................................ 6
  - Mathematics 031 ................................ 3
  - Mathematics 033, 034 ..................... 6
  - Social Science ................................ 6
  - Electives .................................... 3

  **Total:** 30

- **Third Year**
  - Radial Courses ............................ 6
  - Mathematics ................................ 9
  - Electives ................................... 15

  **Total:** 30

- **Fourth Year**
  - Mathematics ................................ 6
  - Radial Courses ............................. 6
  - Electives ................................... 18

  **Total:** 30

---

114
## HISTORY (B.A.)

**Adviser—Professor Armstrong**

### 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 ................. —

| Total | 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 ........................................... 3-5

| Total | 30 |

### Third Year
- Sociology ........................................... 3
- History 003, 004 or 005, 006 or 007, 008 ............. 6
- History Seminar ................................... 2
- Electives ........................................... 19

| Total | 30 |

### Fourth Year
- History ............................................ 8
- Electives ........................................... 22

| Total | 30 |

## ROMANCE LANGUAGES

### FRENCH (B.A.)

**Adviser—Professor Vorrath**

### First Year
- English Composition ....................... 6
- History 001, 002 ................................. 6
- Science ............................................ 6
- French 003, 004 .................................. 6
- Foreign Language ................................ 6
- Physical Education 101, 102 ................. —

| Total | 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

| Total | 30 |

### Third Year
- History 003, 004 or 005, 006 .............. 6
- French 011, 012 or 013, 014 ............... 6
- French 021, 022 or 023, 024 ............... 5
- Electives ........................................... 13

| Total | 30 |

### Fourth Year
- Electives ........................................... 30

| Total | 30 |
### SPANISH (B.A.)

**Adviser—Professor Vorrath**

#### First Year
- English Composition 001, 002 ............ 6
- History 001, 002 .......................... 6
- Science .................................... 6
- Spanish 003, 004 ........................... 6
- Foreign Language .......................... 6
- Physical Education ........................ 30

#### Second Year
- 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

#### Third Year
- History .................................... 6
- Spanish 121, 122 or 123, 124 ............ 6
- Spanish 125, 126 or 009, 010 ............. 4
- Electives .................................. 14

#### Fourth Year
- Spanish 123, 124 or 121, 122 ............ 6
- Electives .................................. 24

#### Fourth Year for Teachers
- Spanish 124 or 122 ....................... 3
- Spanish 128 ................................ 3
- Electives .................................. 12
- Education Semester ....................... 14

---

### PSYCHOLOGY (B.S.)

**Adviser—Professor Fletcher**

#### First Year
- English Composition 001, 002 ............ 6
- Humanities or Psychology 001, 008 .... 6
- Foreign Language .......................... 6
- Biology 003, 004 ........................... 6
- Economics 003, 004 or Political
  - Science 001, 002 ........................ 6
- Physical Education 101, 102 .......... 30

#### Second Year
- Foreign Language 003, 004 ............... 6
- Mathematics 001, 002 ..................... 6
- Psychology 001, 008 or Humanities .... 6
- Biology 021, 022 .......................... 5
- Electives .................................. 7

#### Third Year
- Sociology 001, 002 ........................ 6
- Mathematics 013, 014 .................... 4
- Economics 003, 004 or
  - Political Science 001, 002 .......... 6
- Psychology 031, 032 ..................... 6
- Psychology 010 ........................... 4
- Electives .................................. 4

#### Fourth Year
- Psychology 009, 040 ........................ 6
- Psychology 044 ............................ 1
- Psychology 012 ............................ 3
- Electives .................................. 20

---

116
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 .......... —

Second Year
Foreign Language 003, 004 (if not completed) ........ 6
Psychology 001 ........................ 3
Economics 003, 004 ........................ 6
Political Science 005, 006 .............. 6
Radial Courses ......................... 6
Electives ................................ 3

Sociology 001, 002 ....................... 6
History 013, 014 ......................... 6
Political Science ......................... 6
Electives ................................. 12

Third Year

Fourth Year
Political Science ........................ 4
Electives .................................. 26

SCIENCES
BIOLOGY (B.S.)
Adviser—Professor Wagner

First Year
English Composition 001, 002 ........ 6
Language 001, 002 or 003, 004 .......... 6
CMP267—001, 002 ......................... 18
Physical Education 101, 102 .......... —

Second Year
Biology 103, 104 .......................... 8
English Literature 003, 004 or 019, 020 .. 6
Social Sciences ........................... 6
Humanities ................................ 6
Radial Courses ............................ 6

Third Year

Fourth Year
Biology 020 ................................. 4
Biology 023, 024 ........................... 2
Biology 005, 006 (if not preprofessional) 6
Biology 025 (recommended) ............ 4
Electives ................................. 12 or 14

Biology 010 ................................. 8
Biology 019 ................................. 4
Chemistry 007, 008 ....................... 8
Biology 021, 022 ........................... 5
Radial Courses ............................ 6
Electives ................................. 3 to 6

Electives ................................. 3 to 6

Humanities ................................. 6
Radial Courses ............................ 6

Biology 020 ................................. 4
Biology 023, 024 ........................... 2
Biology 005, 006 (if not preprofessional) 6
Biology 025 (recommended) ............ 4
Electives ................................. 12 or 14

30-33

30-33

32

28-30

117
### SCIENCE (B.S.)
Preparation for Secondary School Teaching in the Sciences

#### I. CONCENTRATION IN BIOLOGY
*Advisers—Professor Wagner and Visiting Professor Wessel*

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMP267—001, 002</td>
<td>Biology 103, 104</td>
</tr>
<tr>
<td>English Composition 001, 002</td>
<td>Biology 017, 018</td>
</tr>
<tr>
<td>Language 001, 002 or 003, 004</td>
<td>or Biology 021, 022</td>
</tr>
<tr>
<td>Physical Education 101, 102</td>
<td>Philosophy 101, 102</td>
</tr>
<tr>
<td></td>
<td>Language 003, 004</td>
</tr>
<tr>
<td></td>
<td>or Social Sciences</td>
</tr>
<tr>
<td></td>
<td>Psychology 001</td>
</tr>
<tr>
<td></td>
<td>Education 002</td>
</tr>
<tr>
<td></td>
<td>30-31</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Fourth Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 017, 018</td>
<td>Biology 010, or 019</td>
</tr>
<tr>
<td>or Biology 021, 022</td>
<td>Education 005</td>
</tr>
<tr>
<td>Biology 005, 006</td>
<td>Education 044</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Education 041</td>
</tr>
<tr>
<td>Education 031, 032</td>
<td>Education 043</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>29-30</td>
<td>12</td>
</tr>
</tbody>
</table>

### CHEMISTRY (B.S.)
*Adviser—Professor Staiger*

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMP267—001, 002</td>
<td>Mathematics 031, 032</td>
</tr>
<tr>
<td>English Composition</td>
<td>Chemistry 007, 008</td>
</tr>
<tr>
<td>German 001, 002 or 003, 004</td>
<td>Chemistry 003, Physics 004</td>
</tr>
<tr>
<td>Physical Education 101, 102</td>
<td>German 003, 004</td>
</tr>
<tr>
<td></td>
<td>Humanities or Social Science</td>
</tr>
<tr>
<td></td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Fourth Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 009, 010</td>
<td>Chemistry 005, 006</td>
</tr>
<tr>
<td>Chemistry 011, 004</td>
<td>Chemistry 013, 012</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td>Chemistry 021, 022, 023, 030</td>
</tr>
<tr>
<td>German 011, 012</td>
<td>Physics 007, 008</td>
</tr>
<tr>
<td>or Radial</td>
<td>German 011, 012</td>
</tr>
<tr>
<td></td>
<td>Radial</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

118
## DEPARTMENTAL REQUIREMENTS

### PHYSICS (B.S.)

**Adviser—Professor Heilemann**

#### First Year
- English Composition 001, 002 ....... 6
- Foreign Language ................. 6
- CMP267—001, 002 ................. 18
- Physical Education 101, 102 ......

#### Second Year
- Radial Courses .......................... 6
- Humanities ............................... 6
- Physics 003, 004 ........................ 8
- Mathematics 031, 032 ............... 6
- Electives .................................. 4

#### Third Year
- Radial Courses ............................ 6
- Social Science ............................ 6
- Physics 005, 006 ........................ 8
- Mathematics 039, 040 ............... 6
- Mathematics 043 ....................... 3
- Electives .................................. 3

#### Fourth Year
- Physics 007, 008 ........................ 6
- Physics 007a, 008a ...................... 2
- Mathematics 045 ....................... 3
- Electives .................................. 19

### II. CONCENTRATION IN CHEMISTRY

**Advisers—Professor Staiger and Visiting Professor Wessel**

#### First Year
- CMP267—001, 002 .......................... 18
- English Composition 001, 002 ....... 6
- Language 001, 002 or 003, 004 ....... 6
- Physical Education 101, 102 ......

#### Second Year
- Biology 003, 004 .......................... 6
- Chemistry 007, 008 ...................... 8
- Education 002 ............................ 3
- History 001, 002 ......................... 6
- Language 003, 004 ....................... 6
- Social Sciences ........................... 6
- Psychology 1 ................................ 3

#### Third Year
- Chemistry 003 ............................. 4
- Education 031, 032 ...................... 6
- Philosophy ................................ 3
- Electives .................................. 17

#### Fourth Year
- Biology 022 ............................... 2
- Education 005 ............................ 8
- Education 044 ............................ 3
- Education 041 ............................ 2
- Education 043 ............................ 1
- Physics 011, 012 .......................... 6
- Chemistry Electives ..................... 6
- Electives ................................. 2

---

119
### III. CONCENTRATION IN PHYSICS

Advisers—Professor Heilemann and Visiting Professor Wessel

#### First Year
- CMP267—001, 002 .................. 18
- English Composition 001, 002 .... 6
- Language 001, 002 or 003, 004 .... 6
- Physical Education 101, 102 .....

---

#### Second Year
- Physics 003, 004 .................. 8
- Mathematics 031, 032 ............. 6
- Education 002 ................... 3
- History 001, 002 ................ 6
- Language 003, 004 ................ 6
- Social Sciences ................... 6
- Psychology 001 .................. 3

---

#### Third Year
- Physics 007, 008 .................. 6
- Mathematics 039, 040 ............. 6
- Education 031, 032 .............. 6
- Philosophy ........................ 3
- Electives .......................... 9

---

#### Fourth Year
- Education 005 .................... 8
- Education 044 .................... 3
- Education 041 ................... 2
- Education 043 .................... 1
- Physics 006 ....................... 4
- Physics 011, 012 .................. 6
- Electives ........................... 6

---

#### Five-Year Combined Liberal Arts—Engineering Program

**URSINUS COLLEGE (B.A.)** THE UNIVERSITY OF PENNSYLVANIA OR OTHER ENGINEERING SCHOOLS (B.S. in Engr.)

**Adviser—Professor Heilemann**

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

#### First Year
- English Composition 001, 002 .... 6
- Foreign Language .................. 6
- CMP 267—001, 002 ................ 18
- Physical Education 101, 102 .....

---

#### Second Year
- Radial Courses ................... 6
- Humanities ........................ 6
- Physics 003, 004 .................. 8
- Mathematics 031, 032 ............. 6
- Drafting ........................... 3
- Desc. Geom. ........................ 3

---

#### Third Year
- Radial Courses ................... 6
- Social Science ..................... 6
- Physics 007, 014 .................. 6
- Mathematics 039, 040 ............. 6
- Electives ........................... 6

---

#### Fourth and Fifth Years
- to be completed at the University of Pennsylvania or other engineering school.
# PLAN II FOR CHEMICAL OR METALLURGICAL ENGINEERS

## First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition 001, 002</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>6</td>
</tr>
<tr>
<td>CMP267—001, 002</td>
<td>18</td>
</tr>
<tr>
<td>Physical Education 101, 102</td>
<td></td>
</tr>
</tbody>
</table>

## Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radial Courses</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 003</td>
<td>4</td>
</tr>
<tr>
<td>Physics 004</td>
<td>4</td>
</tr>
<tr>
<td>Drafting</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 031, 032</td>
<td>6</td>
</tr>
</tbody>
</table>

## Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radial Courses</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 009, 010</td>
<td>8</td>
</tr>
<tr>
<td>Physics 003</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 039, 040</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

## Fourth Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>to be completed at the University of Pennsylvania or other engineering school.</td>
<td></td>
</tr>
</tbody>
</table>

## Departmental Requirements

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.
<table>
<thead>
<tr>
<th>Name</th>
<th>First Elected</th>
<th>Term Expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAMES M. ANDERSON, Wynnewood</td>
<td>1967</td>
<td>1972</td>
</tr>
<tr>
<td>LILLIAN ISENBERG BAHNEY, B.A., Myerstown</td>
<td>1951</td>
<td>1971</td>
</tr>
<tr>
<td>RUSSELL C. BALL, JR., B.S., Paoli</td>
<td>1968</td>
<td>1973</td>
</tr>
<tr>
<td>JOSEPH T. BEARDWOOD, III, B.S., Glenside</td>
<td>1968</td>
<td>1973</td>
</tr>
<tr>
<td>CHARLES A. BEHNEY, B.A., M.D., Bisbee, Arizona</td>
<td>1937</td>
<td>1972</td>
</tr>
<tr>
<td>PHILIP L. CORSON, B.A., LL.D., Plymouth Meeting</td>
<td>1960</td>
<td>1970</td>
</tr>
<tr>
<td>WILLIAM ELLIOTT, LL.D., Collegeville</td>
<td>1964</td>
<td>1969</td>
</tr>
<tr>
<td>MILLARD S. GLADFELTER, Ph.D., Sc.D., LL.D., Jenkintown</td>
<td>1967</td>
<td>1972</td>
</tr>
<tr>
<td>THOMAS P. GLASSMOYER, B.S., LL.D., Willow Grove</td>
<td>1967</td>
<td>1972</td>
</tr>
<tr>
<td>EDWARD L. GRUBER, B.S., Pottstown</td>
<td>1967</td>
<td>1972</td>
</tr>
<tr>
<td>PAUL I. GUEST, B.A., LL.B., Gladwyne</td>
<td>1966</td>
<td>1971</td>
</tr>
<tr>
<td>DONALD L. HELFFERICH, B.A., LL.B., LL.D., Collegeville</td>
<td>1927</td>
<td>1972</td>
</tr>
<tr>
<td>REV. MERRITT J. JEFFERS, M.S., B.D., D.D., Lebanon</td>
<td>1953</td>
<td>1973</td>
</tr>
<tr>
<td>RHEA DURYEA JOHNSON, B.A., Litt.D., Cornwall</td>
<td>1928</td>
<td>1973</td>
</tr>
<tr>
<td>HENRY P. LAUGHLIN, B.S., M.D., Bethesda, Md.</td>
<td>1967</td>
<td>1972</td>
</tr>
<tr>
<td>D. STERLING LIGHT, B.A., Norristown</td>
<td>1947</td>
<td>1972</td>
</tr>
</tbody>
</table>
MABEL PEW MYRIN, Kimberton 1964 1969  
ELLWOOD S. PAISLEY, B.S., Philadelphia 1959 1969  
MURIEL BRANDT PANCOAST, M.A., Collegeville 1960 1970  
BOIES PENROSE, B.A., LL.D., Devon 1964 1969  
WILLIAM D. REIMERT, B.A., LL.D., Allentown 1947 1972  
CHESTER ROBBINS, M.A., LL.D., West Allenhurst, N.J. 1943 1969  
CHARLES V. ROBERTS, B.S., Drexel Hill 1956 1971  
THEODORE R. SCHWALM, LL.D., Lancaster 1963 1973  
CLARENCE A. WARDEN, JR., LL.D., Haverford 1957 1972  
ROY WENHOLD, B.S., M.D., Abington 1968 1973  
HARLESTON R. WOOD, B.A., LL.D., Gladwyne 1956 1971

COMMITTEES OF THE BOARD OF DIRECTORS

Executive Committee: W. D. REIMERT, Chairman; P. L. CORSON, P. I. GUEST, T. P. GLASSMOYER, D. L. HELFFERICH, C. A. WARDEN, JR.

Finance Committee: E. S. PAISLEY, Chairman; J. L. EASTWICK, W. ELLIOTT, E. L. GRUBER, H. R. WOOD, R. C. BALL, JR.

Committee on Buildings and Grounds: J. M. ANDERSON, Chairman; L. I. BAHNEY, D. S. LIGHT, E. S. PAISLEY, C. V. ROBERTS

Committee on Government and Instruction: M. E. GLADFELTER, Chairman; M. P. MYRIN, G. L. THOMAS, JR., J. T. BEARDWOOD, III, P. I. GUEST, D. L. HELFFERICH

Committee on Long-Term Planning: E. S. PAISLEY, Chairman; C. E. BLUM, J. G. HEIGES, H. P. LAUGHLIN, C. V. ROBERTS, H. P. LAUGHLIN, D. L. HELFFERICH

Budget Committee: T. R. SCHWALM, Chairman; W. ELLIOTT, D. L. HELFFERICH, E. S. PAISLEY

OFFICERS OF THE CORPORATION

President: WILLIAM D. REIMERT, Allentown
Vice-President: THEODORE R. SCHWALM, Lancaster
Secretary: ELLWOOD S. PAISLEY, Philadelphia
Assistant Secretary: D. STERLING LIGHT, Norristown
Treasurer: ELLWOOD S. PAISLEY, Philadelphia
DIRECTORY

THE ADMINISTRATION

DONALD L. HELFFERICH, LL.B., LL.D., President
WILLIAM S. PETTIT, M.S., Dean
RICHARD P. RICHTER, M.A., Assistant to the President
GEOFFREY DOLMAN, M.A., Dean of Admissions
H. LLOYD JONES, JR., M.A., Associate Dean of Admissions
MISS RUTH H. ROTHENBERGER, M.A., Dean of Women, Director of Student Activities
RICHARD J. WHATLEY, M.S., Dean of Men
WILLIAM J. PHILLIPS, Ph.D., Director of the Evening and Summer Schools
ELLWOOD S. PAISLEY, LL.D., Treasurer
NELSON M. WILLIAMS, Business Manager
GEORGE W. SEEL, Comptroller
W. ARTHUR SWITZER, M.B.A., Financial Aid Officer
HERMAN M. WESSEL, Ph.D., L.H.D., Director of Placement
EVERETT M. BAILEY, M.A., Director of Athletics
CALVIN D. YOST, JR., Ph.D., Librarian
DONALD C. ESTES, M.S.ed., Alumni Director
FRANK SMITH, B.A., Associate Director of Development
HENRY R. TAYLOR, B.S., Director of Public Relations
REV. ALFRED L. CREAGER, B.D., D.D., College Chaplain
EDWARD H. PLATTE, M.D., College Physician
MISS HELEN M. MOLL, R.N., Resident Nurse
HOWARD W. SCHULTZE, Director of Physical Facilities
J. CARTER TAYLOR, Superintendent of Buildings and Grounds
WILLIAM S. FRIEDEBORN, B.A., Manager of the Supply Store
JOSEPH J. LYNCH, Steward
MRS. BERTHA E. OTTERSTETTER, Dining Hall Hostess
THE FACULTY, 1968-1969*

DONALD LAWRENCE HELFFERICH, A.B., LL.B., LL.D., President
B.A., Ursinus College; LL.B., Yale University School of Law; LL.D., Ursinus College, Temple University.

WILLIAM SCHUYLER PETTIT, M.S., Dean; Professor of Chemistry
B.S. in Chem., M.S., University of Pennsylvania.

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.

RUSSELL DAVIS STURGIS, Ph.D., Sc.D., Emeritus
B.A., University of Delaware; M.S., Ph.D., University of Pennsylvania, Sc.D., University of Delaware.

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

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

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

PAUL RAYMOND WAGNER, Ph.D., J. Harold Brownback Professor of Biology
B.S., Ursinus College; M.S., 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 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.

WILLIAM FRANKLIN PHILIP, Mus. Doc., Professor of Music

*Listed in order of appointment to present rank; appointments of the same year are listed alphabetically.
FOSTER LEROY DENNIS, Ph.D., Professor of Mathematics
B.S., Ursinus College; M.A., Cornell University; Ph.D., University of Illinois.

WILLIAM JOHN PHILLIPS, Ph.D., Director of the Evening and Summer Schools
B.A., M.A., Ph.D., University of Pennsylvania.

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

ALLAN LAKE RICE, Ph.D., 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.

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

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

BERNARD OBLENIS BOGERT, M.A., Visiting Professor of Geology
B.S., Lafayette College; M.A., Columbia University.

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

ELMER ANDREW LISSFELT, M.A., Visiting Professor of Education
B.A., M.A., University of Pittsburgh.

HERMAN MARLUK WESSEL, Ph.D., L.H.D., Director of Placement; Visiting Professor of Education
B.A., Amherst College; M.A., Ph.D., University of Pennsylvania; L.H.D., Amherst College.

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

MATTHEW WILSON BLACK, Ph.D., Visiting Professor of English
A.B., M.A., Ph.D., University of Pennsylvania.

BAL MOKAND ANAND, Ph.D., Visiting Professor of Physics
B.Sc., M.Sc., Panjab University; Ph.D., Bristol University.
DONALD JAMES HUNTER, Ph.D., Professor of Economics
B.S., University of Illinois; M.S., Ph.D., Iowa State University.

EDWARD RICE SELTZER, M.Ed., Visiting Professor of Education
A.B., Muhlenberg College; M.Ed.,

EVAN SAMUEL SNYDER, Ph.D., Professor of Physics
B.S., Ursinus College; M.S., Ph.D., University of Pennsylvania.

PHILIP EUGENE WILLIAMS, Ph.D., Visiting 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.

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.

ALFRED LEON CREAGER, B.D., D.D., Chaplain; 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.

JOHN CHARLES VORRATH, JR., Ph.D., Associate Professor of Romance Lan-
guages
B.A., Ph.D., Yale University.

EVERETT VERNON LEWIS, Ph.D., Associate Professor of Mathematics
B.S., Ph.D., Massachusetts Institute of Technology.

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

*Absent on Sabbatical leave.
DIRECTORY

WILLIAM THOMAS PARSONS, Ph.D., Associate Professor of History
B.A., Ursinus College; M.A., Ph.D., University of Pennsylvania.

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

JAMES DOUGLAS DAVIS, M.A., Associate Professor of History
B.A., Ursinus College; M.A., University of Pennsylvania.

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

ROBERT LEWIS LEIGHT, Ed.D. Adviser to Veterans; Associate Professor of Education

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

RUTH HELEN ROTHENBERGER, 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., Byrn Mawr College.

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

RAYMOND LOUIS RAFETTO, JR., M.A., Assistant Professor of Economics
B.S., Temple University; M.A., University of Pennsylvania.

DAVID WALTER BAKER, Th.B., M.D., Assistant Professor of Religion
B.A., Coe College; Th.B., Princeton Theological Seminary; M.D., University of Pennsylvania.

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.

BRADLEY BATEMAN RIDGE, Ph.D., Assistant Professor of Psychology
B.A., The University of Texas; M.A., Stanford University; Ph.D., Temple University.

RAY KARL SCHULTZ, Ph.D., Assistant Professor of Chemistry
B.S., Muhlenberg College; M.S., Ph.D., Lehigh University.
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, Assistant Professor of Physical Education
B.S., Ursinus College; M.Ed., Temple University.

JAMES PRESSLEY CRAFT, JR., M.S., Assistant Professor in Political Science
B.S., U. S. Naval Academy; M.S., Massachusetts Institute of Technology.

MARY GLEASON MENDELSON, M.S. in L.S., Assistant Librarian
B.A., University of Wichita; M.S. in L.S., Drexel Institute of Technology.

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

MARIAN GERTRUDE SPANGLER, B.A., Instructor in Music
B.A., Ursinus College.

EBERHARD HANS GEIGER, M.A., Instructor in German
Attended Munich and Tubingen Universities; M.A., University of Pennsylvania.

RICHARD PAUL RICHTER, M.A., Assistant to the President; Instructor in English
B.A., Ursinus College; M.A., University of Pennsylvania.

MELVYN HERBERT EHRLICH, M.A., Instructor in English
B.A., M.A., University of Pennsylvania.

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

JOSEPH EDWARD VANNUCCHI, M.A., Director of Forensics; Instructor in French
B.A., King's College; M.A., Pennsylvania State University.

KEITH JORDAN HARDMAN, M.A., Instructor in Philosophy and Religion
B.A., Haverford College; M.A., Columbia University.

HARRIET AXLER APPELBAUM, M.A., Instructor in French
A.B., M.A., Temple University.

RICHARD STUART BREMILLER, M.A., Instructor in Mathematics
B.S., United States Merchant Marine Academy; M.S., Drexel Institute of Technology; M.A., University of Delaware.
ANNETTE VOCK LUCAS, M.A., Instructor in French

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

ANN MARY BODINE, B.A., Instructor in Anthropology
  B.A., University of Puerto Rico.

JOSEPH FRANCIS CAFFREY, M.A., Instructor in Russian
  B.S., Lehigh University; M.A., University of Pennsylvania.

ESTHER SIDNEY COPE, M.A., Instructor in History
  A.B., Wilson College; M.A., University of Wisconsin.

IDA MacDUFFEE DOWNING, M.A., Instructor in Sociology
  A.B., M.A., Temple University.

DEBORAH TOBIAS PORITZ, B.A., Instructor in English
  B.A., Brooklyn College.

GEORGE ARTHUR SHARP, M.A., Instructor in Psychology
  B.S., Thiel College; M.P.S., University of Colorado; M.A., Temple University.

RICHARD OLOF SORENSEN, M.F.A., Instructor in Art
  B.F.A., Minneapolis School of Art; M.F.A., Pratt Institute.

PAUL AUGUST TAMBRINO, M.S., Instructor in Economics
  B.A., Central College; M.S., Hofstra University.

FRANK CALVIN VIDEON, JR., B.S., Instructor in Physical Education
  B.S., Ursinus College.

GARY WILSON, M.A., Instructor in English
  B.S., St. Joseph's College; M.A., Villanova University.

BARBARA BROWN ZIKMUND, B.D., Instructor in History
  B.A., Beloit College; B.D., Duke Divinity School.

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.

MARIE EILEEN DEVINE, M.S. in L.S., Assistant Librarian
  B.A., Ursinus College; M.S. in L.S., Drexel Institute of Technology.

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

Chairman, THE PRESIDENT
Secretary, PROFESSOR STOREY

ACADEMIC COUNCIL

<table>
<thead>
<tr>
<th>The President</th>
<th>Professor Fletcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor Parsons</td>
<td>Mr. Richter</td>
</tr>
<tr>
<td>Professor Byerly</td>
<td>Professor Pancoast</td>
</tr>
</tbody>
</table>

The Dean
Professor Staiger
Professor Vorrath

ADVISERS

Biology Department, Professor Wagner
Chemistry Department, Professor Staiger
Classics Department, Professor Donald G. Baker
Economics Department, Professor Hunter
Engineering, Professor Heilemann
English Department, Professor Yost
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 Heilemann
Political Science Department, Professor Miller
Psychology Department, Professor Fletcher
Romance Languages Department, Professor Vorrath
Undesignated,
  Humanities, Professor Hartzell
  Social Sciences, Professor Parsons
  Natural Sciences, Professor Hess
Graduate Scholarships, Professor Yost
Foreign Students, Professor Rice
Freshman Class, Professor Lewis
Sophomore Class, Professor Hess
Junior Class, Professor Ray K. Schultz
Senior Class, Professor Ridge
COMMITTEES

Admission: THE PRESIDENT, DEAN PETTIT, PROFESSOR DOLMAN, PROFESSOR JONES, PROFESSOR LEIGHT.

Library: THE PRESIDENT, THE LIBRARIAN, PROFESSOR DAVIS, PROFESSOR MARSTELLER, MRS. STAIGER, PROFESSOR MILLER, PROFESSOR VISSER, PROFESSOR HUNTER.

Scholarships: THE PRESIDENT, DEAN PETTIT, PROFESSOR VORRATH, PROFESSOR DOLMAN, PROFESSOR JONES, MR. SWITZER.

Discipline: PROFESSOR VORRATH, DEAN PETTIT, DEAN ROTHENBERGER, DEAN WHATLEY, PROFESSOR DOLMAN, PROFESSOR BAILEY, PROFESSOR BARTH. ALTERNATES: PROFESSOR LEWIS, PROFESSOR PARSONS, MR. VIDEO.

Student Activities: DEAN ROTHENBERGER, DEAN WHATLEY, THE CHAPLAIN, PROFESSOR BLANCHE B. SCHULTZ, PROFESSOR PANCOAST, PROFESSOR RAY K. SCHULTZ, PROFESSOR RAFETTO.

Student Publications: PROFESSOR STOREY, PROFESSOR JONES, MR. EHRLICH, MR. RICHTER, MR. CLYMER, MR. WILSON.

Athletics: PROFESSOR BAILEY, PROFESSOR PANCOAST, PROFESSOR DOLMAN, DEAN WHATLEY, PROFESSOR GURZYNSKI, PROFESSOR SNELL.

Forum and Cultural Activities: DEAN ROTHENBERGER, PROFESSOR DONALD G. BAKER, PROFESSOR PHILIP, PROFESSOR CREAGER, PROFESSOR WILLIAMS, MR. SORENSON.

THE STAFF

Resident Heads

MRS. A. E. SCHELLHASE, Schaff Hall
MRS. LAWRENCE H. PEARSON, B.S., Beardwood Hall
MRS. H. CLAYTON MOYER, 944 Main Street
MRS. DOROTHY CAREY, Hobson Hall
MRS. BRAINARD W. BENNER, Stauffer Hall
MRS. HELYN WOOD, M.A., Clamer Hall
MRS. PAUL E. TOWERS, Paisley Hall
MRS. R. MAX SCHLEGEL, Duryea Hall
MRS. KATHRYN K. HOGE, Shreiner Hall
MRS. BERTHE E. OTTERSTETTER, 942 Main Street
MRS. MARY MOYER, Todd Hall
MRS. HAROLD L. MERRICK, Keigwin Hall

133
Library

MRS. ROGER P. STAIGER, B.A.
MRS. EMANUEL S. MENDELSON, M.S. in L.S.
MARIE EILEEN DEVINE, M.S. in L.S.
KATHERINE WOOD KNEAS, B.S. in L.S.

Assistants

MR. DALE DRAKE, Treasurer’s Office
MRS. Verna Schushnar, R. N., Assistant Resident Nurse
MR. JAMES M. PARKER, Assistant to the Steward

PRIZES, HONORS, DEGREES

AWARDED IN 1968

The Alumni Senior Award—Richard Dennis DiEugenio and Harriet Ann Metzgar, ’68
The American Chemical Society Award—Carolyn Ruth Meredith, ’68
The Boeshore Prize—Richard Emery Taylor, ’69
The John C. Boyer Memorial Prize—Donald Richard James, ’70
Cub and Key Scholarship—Alan Paul Novak, ’71
The George Ditter Prize—John Landis Gabel, ’68
The Duttera Prize—Cliffert Francis Herring, Jr., ’69
The Ehret Prize—James Lee Hoffmaster, ’69
The Philip H. Fogel Memorial Prize—Timothy Carlton Rupp, ’68
The Ronald C. Kichline Athletic Prize—Robert Lester Compton, Jr., ’68
The Elizabeth Rockefeller McCain Prize—Diann Marie Leiby, ’70
The Pennsylvania Institute of Certified Public Accountants Award—Donald Wayne Scott, ’68
The Peters Prize—Kenneth G. Guistwite and Richard N. Landis, ’68
The Ellen Beaver Schlaybach Memorial Prize—Carolyn Ruth Meredith, ’68
The Robert Truxness Prize—Leroy George Adams, ’68
The Ursinus Women’s Club Prize—Joan Elaine Moser, ’68
The Wagman Prize—Eugene Paget Searfoss, ’69
The Elizabeth B. White Prize—Anderson Jane Smith, ’68
The Professor Elizabeth B. White Prize—Stewart Ross Doughty, ’68
The Whitian Prize—Patricia Ann Mellon, ’71

COMMENCEMENT HONORS

VALEDICTORIAN: Carolyn Ruth Meredith
SALUTATORIAN: Charlotte Ann Frost
MAGNA CUM LAUDE: Charlotte Ann Frost
Carolyn Ruth Meredith
CUM LAUDE:  Alexis Christine Anderson
               Nancy Elaine Coleman
               Stewart Ross Doughly
               Elise Edwina Kabcenel
               Richard Nyce Landis
               Thomas William Miller
               Linda Marie Pyle
               Anderson Jane Smith
               Ronald Tietjen
               Eileen Rose Toth

DEPARTMENTAL HONORS

BIOLOGY:  Arthur Lorin Craig

ECONOMICS:  Nancy Elaine Coleman

FRENCH:  Ainslie Irene Armstrong

GERMAN:  Robert Lester Compton, Jr.
          Jeanne LaVerne Johnston
          Pamela Reed Koch

HISTORY:  Gary Bronson
          Anderson Jane Smith

MATHEMATICS:  Rose Mary Holliday

PHILOSOPHY:  Thomas William Miller

PHYSICS:  Robert Scott Laughlin

POLITICAL SCIENCE:  Linda Ruth Dettery

PSYCHOLOGY:  Richard Nyce Landis
              Betsy Ann Miller

SPANISH:  Linda Marie Pyle

CHAPTER SCHOLARS

Alexis Christine Anderson  Thomas William Miller
Lawrence David Bernstein  Linda Marie Pyle
Linda Ruth Dettery        Timothy Carlton Rupp
Jeanne LaVerne Johnston  Fred Robert Savitz
Elise Edwina Kabcenel     Anderson Jane Smith
Carolyn Ruth Meredith     Ronald Tietjen
DEGREES, 1968
DOCTOR OF DIVINITY (Honorary)  
DOCTOR OF DIVINITY (Honorary)  
DOCTOR OF LAWS (Honorary)  
DOCTOR OF LAWS (Honorary)  
DOCTOR OF HUMANE LETTERS (Honorary)  
DOCTOR OF SCIENCE (Honorary)  
DOCTOR OF SCIENCE (Honorary)  

Theodore Sylvester Ledbetter  
Richard Tyson Schellhase  
Nora Shuler Helfferich  
Ellwood Strassburger Paisley  
Al Capp  
James Henry Baird  
John Boyd Coates, Jr.

ASSOCIATE IN BUSINESS ADMINISTRATION  
John Grover Boggs  
William Kenneth Buck, Jr.  
Richard Charles Buckwalter  
Neal Arlend Daub  
Earl Linwood Decker  
Roy Albert Gerhart  
Lynne Dunlop Ingram  
Thomas Julian James  
George Gehret Jones, Jr.  
Merle Wilson Richman, Jr.  
Harry Richard Rutter  
Charles Ernest Straubel  
Warren Dixon Stubblefield  
Charlotte Michelle Wosczyna

BACHELOR OF BUSINESS ADMINISTRATION  
Donald Herbert Haines  
Charles William Lutter  
Albert Justis Zelley

BACHELOR OF ARTS  
Leroy George Adams  
David Lee Allebach, Jr.  
Alexis Christine Anderson  
Ainslie Irene Armstrong  
Marguerite Constance Atkinson  
Paul John Barrow  
John Jerome Basco  
Andrew Eugene Beck  
Phyllis Mary Blanchard  
Jean Bonkoski  
Kenneth Wilson Bosler  
Gary S. Bronson  
John Reynolds Buckley  
Carolyn Ann Carl  
Gordon Haigh Cawthray, Jr.  
Thomas Edward Chilcott  
Katherine Jane Clark  
Diane Bosch Coates  
Nancy Elaine Coleman  
Lucinda Jocelyn Comly  
Robert Lester Compton, Jr.  
Wayne Russell Cromie  
Mary Mazur Cuthbert  
Peter John D'Achille, Jr.  
Richard Walter Dalton  
John Braden Darrah, II  
Kenneth Thomas Dean, Jr.  
Linda Ruth Dettery  
Richard Dennis DiEugenio  
Lance Kane Diskan  
Sandra Lee Donahue  
Stewart Ross Doughty  
Phyllis Anne Dugan  
George Eastburn, Jr.,  
Louis Barry Erb  
John Frederick Esbenshade, Jr.  
James Buyers Farr  
Virginia Ann McMaster Farrington

136
Charles Edgar Fielding, Jr.
Charity Dawn Finkbiner
Charles Edgar Fryer
William Carmen Richard Giannattasio
Robert Paul Gilman
Carol Ann Good
Alfred Walter Gramp
Pamela Claire Green
Sharon Louise Groff
William Jonathan Grove, Jr.
Susan Jane Hartman
John Charles Heckles
George Ward Herbert
Mildred Pierce Hetzel
Gretchen Myler Hoffman
David Paul Hunter
Gordon Albert Istenes
Joseph Byron Jennings
Won Yang Juhng
Elise Edwina Kabcenel
David Stephen Kaplan
Anne Monsell Kinney
Pamela Reed Koch
Stuart George Koch
Frederick Joseph Kupeski
James Joseph Kyack
Sheila O'Dara Lambert
Robert Scott Laughlin
Loretta Louise Lee
Patricia Faith Leopold
Emma Gertrude Levering
Frederick Henry Light
Cynthia Betner Manonian
Leslie Susan March
Robert James McCormick
Paula Fusco McLaughlin
Sandra Ellen McLean
Richard James McNoldy
Thomas William Miller

Ellwood Spencer Paisley, Jr.
Anita Park
Charles Ronald Parker
Ronald Pittore
Michael Irwin Pollock
Catherine Pregmon
Patricia Eaves Price
Kerry Jay Pursel
Linda Marie Pyle
Benjamin Alan Rau
Marjorie Sue Rogasner
Larry Robert Roth
Dennis William Roxberry
Susan Jeanne Royack
Eric George Ruoss
Timothy Carlton Rupp
Martha Newhart Sales
Fred Robert Savitz
Edward Paul Schaal
Caroline Helen Schea
Donald Wayne Scott
Karen Jean Selfridge
Barry Earle Shoemaker
Anderson Jane Smith
Herbert Charles Smith
Kathleen Smith
Luther Henry Smith, Jr.
Thomas McCrae Tai
Rebecca Lynn Thompson
Kristina Ann Trupp
Richard Vincent Voll
Marilyn Elizabeth Waite
Lynne Eloise Walbert
Perry Sinclair Warren
Diane Carole Widman
Nancy Kindon Wierman
Joy Elaine Windle
Susan Ruth Yeakley
Charles William Yerger
BACHELOR OF SCIENCE

Robert Laurence Barrett
Richard John Behenna
Kay Marie Bergstresser
Gary Richard Berman
James Paul Blore, Jr.
Gilbert Alan Bolitho
Barbara Florence Bruno
David Karl Burkhardt
Suzanne Elaine Butler
Michael Edward Callahan
Clive Lee Carney
Thomas Anthony Cassano
Eileen Julia Cornell
Arthur Lorin Craig
Susan Joanne Decker
Anne Louise Detwiler
Barry Lloyd Dickey
Helen Diane Dix
Barbara Lopez Doughty
James Hargreaves Earhart
Janice Ruth Everly
Ronald Merle Fabian
Martin Jerold Fleishman
Phyllis Alberta Folk
Harvey Richard Forman
Ronald Richard Frantz
Charlotte Ann Frost
John Landis Gabel
Arthur Henry Gerber
Donald Russell Green
Kenneth Richard Guistwite
Elizabeth Clarice Hall
Ruth Linda Hamburg
David Boyer Harbaugh
Rose Mary Holliday
Elise Ann Hopkins
Eleanor MacDonald Hyatt
David Andre Jarinko
Jeanne LaVerne Johnston
Lehman Earl Kapp, Jr.
Nancy Louise Kiefer

Susan Jensen Kniep
Claudia Jane Kleppinger
Barry William Kram
John Jay Kravitz
Ellamay Mildred Kreisinger
Carol Ann LaBar
Richard Nyce Landis
Charles Arthur Ledbetter
Leonard Steven Lichtenstein
Mitchell Brian Lowenstein
Frank Allen Lyon
Wilhelmine Johanna Lysinger
Robert Strong MacFarland
Charles Norman Maguire, Jr.
Hercules Louis Marsella
William Kenneth Marts
David Arthur McCoy
Linda Leigh McIntyre
Joanne Stark McNeer
Judith Adeline Mercer
Carolyn Ruth Meredith
Neal Stuart Meritz
Harriet Ann Metzgar
Betsy Ann Miller
Richard Lawrence Miller
Ralph Stuart Milner
Joan Elaine Moser
Linda Ann Newhart
Ruth Elaine Marie Nielsen
Richard Howard Niemeyer
William Alexander Nonnemacher
Fred Bryan Nurenberg
Richard Walter Olson
Susan Lynn Pasimeni
Patricia Anne Patton
Marc Irvin Perkins
David Cregar Pool
John Lawton Pote
Raymond Robert Ritting
Sandra Lynn Rule
Richard Leroy Sands

138
Pamela Schoch
JoAnn Douglas
Short
Carol Ruth Smith
Betty Miller Souders
Barry Eugene Spencer
Susan Shields Spohn
Robert Excel Steward, Jr.
Ronald Tietjen

Eileen Rose Toth
Patricia Jean Trinley
Bronwen Margaret Umberger
Michael Charles Urenovich
Janis Louise VanHorn
William Arthur VanSaun, Jr.
Dorothy Patricia Voelker
Jean Lee Winter
Frederick Russell Zaengle, Jr.

ALUMNI ASSOCIATION

Secretary-Treasurer—Mrs. Lawrence M. Habgood, Jr., '62, 31 Chelfield Road, North Hills, Pa.
Alumni Secretary—Donald C. Estes, Ursinus College, Collegeville, Pa.

ALUMNI REPRESENTATIVES
Fred, Geiger, '51, 170 Cooper Ave., Landisville, Pa.
B. Keith Moyer, '60, Box 21, Kimberton, Pa.
Mrs. Norman Harberger, '50, 1830 Canterbury Road, Abington, Pa.
Walter M. Tropp, '34, 130 N. Broadway, Camden, N.J.

FACULTY REPRESENTATIVES
Mrs. Blanche B. Schultz, '41, 63 W. 5th Ave., Collegeville, Pa.

ALUMNI DIRECTORS
Henry P. Laughlin, M.D., '38, 4401 East-West Hwy., Bethesda, Md.
Paul I. Guest, Esq., '38, 1316 Colton Road, Gladwyne, Pa.
Jesse G. Heiges, Esq., '35, 440 East 56th St., New York, N.Y.
Mrs. G. Sieber Pancoast, '38, 122 W. Seventh Ave., Collegeville, Pa.
Joseph T. Beardwood III, '51, 620 Laverock Road, Glenside, Pa.
OFFICERS—REGIONAL ALUMNI GROUPS 1968-69

LEHIGH VALLEY
President—Mrs. Jeannette Schmoyer, 430 E. Paoli St., Allentown, Pa.
Secretary—Mrs. Carolyn Moore, '62, 418 Main St., Egypt, Pa.

NEW YORK
President—Thomas G. Phillips, 53, 277 Old Tote Rd., Mountainside, N.J.
Secretary—Judith Habek, 64, 131 Midland Terrace, Yonkers, N.Y.

YORK
President—J. Scott Zanger, '58, 450 Glenwyn Drive, Littlestown, Pa. 17340

SCHUYLKILL VALLEY
President—William B. Stafford, Jr., '26, 826 Church St., Royersford, Pa. 19468

WASHINGTON, D.C.
President—Nelson M. Bortz, '30, 7901 Greentree Rd., Bethesda, Md.
Secretary—Walter L. Wright, III, '54, 3902 W Street, N.W., Washington, D.C.

PHILADELPHIA
President—Robert A. Livingston, '64, 500 E. Wynnewood Rd., Wynnewood, Pa.

OHIO
President—Charles C. Wallick, '38, 4956 Countryside Road, Lyndhurst, Ohio
Vice-President—Carl F. Peek, 810 Matson Place, Cincinnati, Ohio

Baltimore
President—Roger Dreschler, Esq., '51, 5504 Lombardy Place, Baltimore, Md.

CHICAGO
President—Terence J. Kearney, 820 Judson, Evanston, Ill.
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 6</td>
<td>Monday</td>
<td>Christmas Recess ends, 8:00 A.M.</td>
</tr>
<tr>
<td>January 23</td>
<td>Thursday</td>
<td>First Semester examinations begin</td>
</tr>
<tr>
<td>February 1</td>
<td>Saturday</td>
<td>First Semester examinations end</td>
</tr>
<tr>
<td>February 10</td>
<td>Monday</td>
<td>Second Semester begins, 8:00 A.M. Registration of New Students</td>
</tr>
<tr>
<td>February 15</td>
<td>Saturday</td>
<td>Last day for filing Open Scholarships and Financial Grant Applications</td>
</tr>
<tr>
<td>March 28</td>
<td>Friday</td>
<td>Mid-Semester grades due, 4:00 P.M.</td>
</tr>
<tr>
<td>March 29</td>
<td>Saturday</td>
<td>Spring Recess begins, 1:00 P.M.</td>
</tr>
<tr>
<td>April 7</td>
<td>Monday</td>
<td>Easter Monday—No Classes</td>
</tr>
<tr>
<td>April 8</td>
<td>Tuesday</td>
<td>Spring Recess ends, 8:00 A.M.</td>
</tr>
<tr>
<td>April 21</td>
<td>Monday</td>
<td>Pre-Registration begins</td>
</tr>
<tr>
<td>May 29</td>
<td>Thursday</td>
<td>Second Semester examinations begin</td>
</tr>
<tr>
<td>June 7</td>
<td>Saturday</td>
<td>Second Semester examinations end</td>
</tr>
<tr>
<td>June 7</td>
<td>Saturday</td>
<td>Alumni Day</td>
</tr>
<tr>
<td>June 8</td>
<td>Sunday</td>
<td>Baccalaureate Service, 10:45 A.M.</td>
</tr>
<tr>
<td>June 9</td>
<td>Monday</td>
<td>Commencement, 11:00 A.M.</td>
</tr>
<tr>
<td>June 11</td>
<td>Wednesday</td>
<td>Summer School begins, 8:00 A.M.</td>
</tr>
<tr>
<td>August 29</td>
<td>Friday</td>
<td>Summer School ends, 5:30 P.M.</td>
</tr>
<tr>
<td>September 20</td>
<td>Saturday</td>
<td>Freshman Program begins, Academic Convocation, 4:00 P.M.</td>
</tr>
<tr>
<td>September 22</td>
<td>Monday</td>
<td>Registration of New Students</td>
</tr>
<tr>
<td>September 23</td>
<td>Tuesday</td>
<td>Second day of Registration</td>
</tr>
<tr>
<td>September 24</td>
<td>Wednesday</td>
<td>First Semester begins, 8:00 A.M.</td>
</tr>
<tr>
<td>October 11</td>
<td>Saturday</td>
<td>Parents' Day</td>
</tr>
<tr>
<td>October 25</td>
<td>Saturday</td>
<td>Homecoming Day</td>
</tr>
<tr>
<td>November 2</td>
<td>Sunday</td>
<td>Founders' Day Convocation 3:00 P.M.</td>
</tr>
<tr>
<td>November 10</td>
<td>Monday</td>
<td>Mid-Semester Grades submitted by Faculty, 9:00 A.M.</td>
</tr>
<tr>
<td>November 13</td>
<td>Thursday</td>
<td>Mid-Semester Grades mailed</td>
</tr>
<tr>
<td>November 26</td>
<td>Wednesday</td>
<td>Thanksgiving Recess begins 5:30 P.M.</td>
</tr>
<tr>
<td>December 1</td>
<td>Monday</td>
<td>Thanksgiving Recess ends 8:00 A.M.</td>
</tr>
<tr>
<td>December 20</td>
<td>Saturday</td>
<td>Christmas Recess begins 5:30 P.M.</td>
</tr>
</tbody>
</table>

141
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 5</td>
<td>Monday</td>
<td>Christmas Recess ends, 8:00 A.M.</td>
</tr>
<tr>
<td>January 22</td>
<td>Thursday</td>
<td>First Semester examinations begin</td>
</tr>
<tr>
<td>January 31</td>
<td>Saturday</td>
<td>First Semester examinations end</td>
</tr>
<tr>
<td>February 9</td>
<td>Monday</td>
<td>Second Semester begins, 8:00 A.M. Registration of New Students</td>
</tr>
<tr>
<td>February 14</td>
<td>Saturday</td>
<td>Last day for filing Open Scholarships and Financial Grant Applications</td>
</tr>
<tr>
<td>March 26</td>
<td>Thursday</td>
<td>Mid-Semester grades submitted by Faculty, 4:00 P.M.</td>
</tr>
<tr>
<td>March 26</td>
<td>Thursday</td>
<td>Spring Recess begins, 5:30 P.M.</td>
</tr>
<tr>
<td>April 1</td>
<td>Wednesday</td>
<td>Mid-Semester grades mailed</td>
</tr>
<tr>
<td>April 6</td>
<td>Monday</td>
<td>Spring Recess ends, 8:00 A.M.</td>
</tr>
<tr>
<td>April 20</td>
<td>Monday</td>
<td>Pre-Registration begins</td>
</tr>
<tr>
<td>May 28</td>
<td>Thursday</td>
<td>Second Semester examinations begin</td>
</tr>
<tr>
<td>June 6</td>
<td>Saturday</td>
<td>Second Semester examinations end</td>
</tr>
<tr>
<td>June 6</td>
<td>Saturday</td>
<td>Alumni Day</td>
</tr>
<tr>
<td>June 7</td>
<td>Sunday</td>
<td>Baccalaureate Service, 10:45 A.M.</td>
</tr>
<tr>
<td>June 8</td>
<td>Monday</td>
<td>Commencement, 11:00 A.M.</td>
</tr>
<tr>
<td>June 10</td>
<td>Wednesday</td>
<td>Summer School begins, 8:00 A.M.</td>
</tr>
<tr>
<td>August 28</td>
<td>Friday</td>
<td>Summer School ends, 5:30 P.M.</td>
</tr>
<tr>
<td>September 19</td>
<td>Saturday</td>
<td>Freshman Program begins, Academic Convocation, 4:00 P.M.</td>
</tr>
<tr>
<td>September 21</td>
<td>Monday</td>
<td>Registration of New Students</td>
</tr>
<tr>
<td>September 22</td>
<td>Tuesday</td>
<td>Second day of Registration</td>
</tr>
<tr>
<td>September 23</td>
<td>Wednesday</td>
<td>First Semester begins, 8:00 A.M.</td>
</tr>
</tbody>
</table>
INDEX

Absences ................................. 37
Academic Council ......................... 132
Acceleration ............................. 27
Accreditation .................. 9
Administration ...................... 125
Administrative Staff .......... 133
Admission ............................... 19
Admission, Notification of ......... 23
Advanced Standing and Placement ... 22
Advisers ............................... 35
List of .................................. 132
Alumni Association ...................... 139
Astronomy, see Physics ........................
Athletics .............................. 12
Bills ...................................... 29
Biology, Courses in .............. 49
Departmental Requirements .......... 117
Board Costs ............................ 29
Book store ............................. 16
Botany, see Biology ..................
Buildings and Grounds .............. 15
Bureau of Student Employment .. 33
Calendar, College, 1969-1970 .... 141
Camp for Women ...................... 39
Career Opportunities .............. 24
Centennial Scholarships .......... 32
Chapter, The .......................... 39
Chemistry, Courses in .......... 53
Departmental Requirements ....... 119
Choice of Studies ................. 36
Classical Languages, Courses in ... 57
Departmental Requirements ....... 111
Committees, Board of Directors .. 124
Committees, Faculty ................ 133
Correspondence with the College .. 4
Costs ...................................... 29
Courses in Instruction ........... 49
Degrees Awarded in 1968 ...... 136
Degrees .................................. 38
Departmental Requirements .... 111
Directors, Board of .......... 123
Directory ............................... 123
Dormitories .................. 17
Drafting, Courses in ............ 58
Early Decision ......................... 21
Economics, Courses in ............ 59
Departmental Requirements .... 112
Education, Courses in .......... 62
Educational Program .......... 35
Employment, Student, Bureau of .. 33
Engineering Program ...... 21
Departmental Requirements .... 120
English, Courses in .......... 65
Departmental Requirements .... 111
Evening School ......................... 24
Expenses ............................... 29
Extra-curricular Activities .......... 13
Faculty, 1968-1969 .............. 126
Fees ...................................... 29
Financial Aid ......................... 32
Fine Arts, Course in .............. 70
Foreign Languages, Placement in ... 21
Foreign Students ..................... 40
Foreign Study, Junior Year ....... 40
French, Courses in ............... 102
Departmental Requirements .... 115
Geography, Courses in ........... 70
Geology, Courses in ............. 71
Geometry, Descriptive, Courses in ... 58
German, Courses in .......... 71
Departmental Requirements .... 112
Government, see Political Science
Grades of Scholarship ............ 38
Graduation ............................. 36
Requirements for ................. 36
Grants, Financial ................. 34
Greek, Courses in ........... 57
Departmental Requirements .... 111
Gymnasiums ............................ 16
Health & Physical Ed., Courses in ... 74
Departmental Requirements .... 113
History, Courses in .............. 79
Departmental Requirements .... 115
History of Ursinus .................. 8
Honors .................................. 39
Awarded in 1968 ................. 134
Honors upon Entrance ............ 32
Insurance, Accident and Health .. 12
Integrated Course in Physical Sciences 107
Junior Year Abroad ............... 40
Language Laboratories, use of ... 37
Latin, Courses in ................. 58
Departmental Requirements .... 111
Library ................................. 15
Loans ................................. 34
 Majors, Requirements for ...... 111
Map, Campus .......................... Inside Back Cover
Map, S.E. Penna. .................. Inside Front Cover

143
Mathematics, Courses in .................................. 83
Departmental Requirements .......................... 114
Matriculation .............................................. 19
Meals ......................................................... 11
Medical Service and Insurance ....................... 11
Music, Courses in ......................................... 87
Private Instruction ......................................... 30
Notification of Admission ................................ 23
Nurse, Resident ............................................. 11
Officers of the Corporation (Board) ..................... 124
Officers, Faculty ........................................... 132
Organizations .............................................. 12
Part-Time Students ......................................... 23
Payments ................................................... 29
Philosophy, Courses in ................................... 89
Departmental Requirements .......................... 113
Physical Education Activities ......................... 12, 77
Physician ..................................................... 11
Physics, Courses in ....................................... 92
Departmental Requirements .......................... 119
Placement Bureau .......................................... 26
Political Science, Courses in ............................ 96
Departmental Requirements .......................... 117
Post Office .................................................... 16
Presidential Scholarships ................................. 32
Principles, College ......................................... 8
Prizes Awarded in 1968 .................................. 134
Psychology, Courses in .................................. 99
Departmental Requirements .......................... 116
Publications ................................................. 13
Public Speaking, Courses in ......................... 101
Registration ................................................ 36
Regulations ................................................. 31

Religion, Courses in ...................................... 89
Requirements, Admission ................................ 20
Requirements, Graduation ............................. 36
Resident Nurse ............................................ 11
Rooms and Meals .......................................... 11
Romance Languages, Courses in ..................... 102
Departmental Requirements .......................... 115
Russian, Courses in ....................................... 73
Scholarships ................................................ 32
Senior Symposium, Courses in ....................... 109
Sigma Xi, Society of the ................................ 39
Sociology, Courses in ................................... 106
Spanish, Courses in ....................................... 104
Departmental Requirements .......................... 116
Special Offerings .......................................... 107
Special Students ........................................... 22
Store, College .............................................. 16
Student Employment, Bureau of ....................... 33
Summer School ............................................ 23
Summer Reading Program ................................ 35
Swedish, Courses in ....................................... 73
Teaching, Requirements for Certification .......... 62
Terms and Vacations ....................................... 141
Transfer Students .......................................... 22
Tuition ......................................................... 29
Tuition Exchange Program ............................... 24
Ursinus Plan, The .......................................... 41
Vocations, preparation for ............................... 24
Withdrawals ............................................... 31
Work-Study Program ...................................... 33
Worship, Public ............................................ 11
Zoology, see Biology ......................................

PHOTOGRAPHY: ALFRED S. ALTMAN

144
THE URSINUS COLLEGE CAMPUS

KEY TO THE CAMPUS

1. Pfahler Hall of Science (laboratories, classrooms, Evening School)
2. Curtis Hall, dormitory for men
3. Wilkinson Hall, lounge and dormitory for men
4. Brodbeck Hall, dormitory for men
5. Library (1969)
6. Bomberger Memorial Hall (chapel, classrooms, administration, lounge, recreation, etc.)
7. Post Office, Store and Snack Bar
8. Library (Student Center 1969)
10. Studio Cottage
11. Infirmary
12. Maintenance Building
13. Paisley, Stauffer, Beardwood Halls, dormitories for women
14. College Gymnasium
15. Thompson-Gay Gymnasium
16. Heating and Power Plant
17. Wismer Hall (dining, theater, classrooms)
18. Dormitory for women, 944 Main Street
19. Dormitory for women, 942 Main Street
20. Fircroft Hall, dormitory for men, 940 Main Street
21. Iceberg Hall, dormitory for men, 901 Main Street
22. Todd Hall, dormitory for women, 724 Main Street
23. Onwowe Hall, dormitory for men, 701 Main Street
24. Schaff Hall, dormitory for women, 646 Main Street
25. Olevian Hall, dormitory for women, 640 Main Street
26. Zeising Hall, Alumni, Development, U.C.C. Conf. Hdq, 620 Main Street
27. Duryea Hall, dormitory for women, 612 Main Street
28. Shreiner Hall, dormitory for women, 6th Avenue and Main Street
29. South Hall, Development, 6th Avenue
30. Hobson Hall, dormitory for women, 568 Main Street
31. Fetterolf House, Faculty Offices, 554 Main Street
32. Super House, President's home, 542 Main Street
33. Trinity Church, United Church of Christ
34. The Parsonage, 522 Main Street
35. Maples Hall, dormitory for men, 520 Main Street
36. Keigwin Hall, dormitory for women, 513 Main Street
37. Clamer Hall, dormitory for women, 409 Main Street
38. Dormitory for men
39. Convocation Hall-Chapel (1971)
40. 777 Main Street, dormitory for women