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1973-1976 Catalog

College of the Holy Cross

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HOLY CROSS

catalog 1973-1974

catalog 1974-1975

catalog 1975-1976
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(1973 - 1974)

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   Treasurer, Amherst College, Amherst, Mass. 01002
THE
COLLEGE
of the
HOLY CROSS
A College of Arts and Sciences
Worcester, Massachusetts 01610

CATALOG

Volume 68
1973-74
1974-75
1975-76

The College Catalog is a document of record issued in September, 1973, for three years. Addenda to this Catalog will be published in September 1974 and 1975.
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Academic Calendar

September, 1973 — June, 1974

FALL SEMESTER — 1973-1974

September
10 Mon. Freshmen take examinations: Seniors, Juniors, Sophomores and Freshmen meet with Advisors.
P.M.: Sophomores register in major field; Seniors register in non-major fields. Freshmen meet with Advisors.

P.M.: Freshmen register.

13 Thurs. Fall semester begins.

October
22 Mon. Holiday.
23 Tues. Holiday.

November
20 Tues. Thanksgiving recess begins after last class.
26 Mon. Classes resume.

December
21 Fri. Semester recess begins after last class.

January
7 Mon. Study week begins.
14 Mon. Final term examinations begin.
21 Mon. Final term examinations end.

SPRING SEMESTER — 1973-1974

January
28-29 Mon. Registration and Advising.
Tues. Spring semester begins.
30 Wed. Spring vacation begins after last class.

March
15 Fri. Spring vacation begins after last class.
25 Mon. Classes resume.

April
11 Thurs. Easter recess begins after last class.
16 Tues. Classes resume.

May
9 Thurs. Study Week begins.
14 Tues. Final term examinations begin.
21 Tues. Final term examinations end.
27 Mon. Holiday.
30 Thurs. BACCALAUREATE EXERCISES.
31 Fri. COMMENCEMENT.
Correspondence Directory

Correspondence should be addressed to all college officials listed below and mailed to College of the Holy Cross, Worcester, Massachusetts 01610.

<table>
<thead>
<tr>
<th>Department</th>
<th>Title/Position</th>
</tr>
</thead>
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<tr>
<td>Academic Records</td>
<td>Registrar</td>
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<tr>
<td>Alumni Placement</td>
<td>Director of Alumni Placement</td>
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<tr>
<td>Admission and Catalogs</td>
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<td>Alumni Affairs</td>
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<td>Alumni Fund</td>
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<td>Archives</td>
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<tr>
<td>Athletics</td>
<td>Director of Athletics</td>
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<tr>
<td>Business Affairs</td>
<td>Vice President for Business Affairs</td>
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<td>Counseling Center</td>
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<td>Educational Program</td>
<td>Vice President and Dean of the College</td>
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<tr>
<td>Financial Aid</td>
<td>Director of Financial Aid</td>
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<td>General College Policy</td>
<td>President</td>
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<td>Graduate Studies</td>
<td>Director of Graduate Studies</td>
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<td>Library Information</td>
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<td>Personnel</td>
<td>Director of Personnel</td>
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<td>Physical Plant</td>
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<td>Public Affairs</td>
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## Telephone Directory

**AREA CODE 617**

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<tr>
<td>Alumni Association</td>
<td>793-2418</td>
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<tr>
<td>Chaplain of the College</td>
<td>-2428</td>
</tr>
<tr>
<td>Dean of the College</td>
<td>-2541</td>
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<tr>
<td>Dean of Students</td>
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<td>Director of Admissions</td>
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<td>Director of Alumni Fund</td>
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<tr>
<td>Director of Placement and Career Counseling</td>
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<tr>
<td>Director of Athletics</td>
<td>-2582</td>
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<td>Director of Campus Center</td>
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<td>Director of Counseling Center</td>
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<td>Director of Graduate Studies</td>
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<td>Director of Personnel</td>
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<td>Director of Public Affairs</td>
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<td>Director of Purchasing</td>
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<td>Director of Special Studies</td>
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<td>Director of Student Activities</td>
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<td>Information and Operator</td>
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<td>Office of Student Activities</td>
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<tr>
<td>Registrar</td>
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<tr>
<td>ROTC, Air Force</td>
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<td>ROTC, Naval</td>
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<tr>
<td>Treasurer</td>
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<tr>
<td>Vice President for Business Affairs</td>
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</tr>
<tr>
<td>Vice President and Dean of College</td>
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<tr>
<td>Vice President for Development and College Relations</td>
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</table>
The College Of The Holy Cross

The Beginnings

The College of the Holy Cross was founded in 1843 by Benedict Joseph Fenwick, Second Bishop of Boston. The Bishop gave the College the name of his cathedral and the seal and motto of the Boston Diocese. He entrusted the direction of the College to the Fathers of the Society of Jesus. Classes began on November 2, 1843, and in 1844 the first college building was erected to accommodate ninety students. On July 14, 1852 a fire destroyed all but the east wing of this building. The College was reopened in the newly constructed Fenwick Hall in October, 1853.

From 1849 to 1853 and from 1858 to 1965, degrees were conferred by Georgetown University. In 1865 the College received its own charter from the state and conferred its own degrees. Holy Cross became a co-educational institution in September, 1972.


Objectives

It is the intent of the College of the Holy Cross to create and to foster a formal educational contest in which all concerned may pursue the ultimate human questions, entertain the highest human hopes, and move towards the most basic human decisions. In short, the College seeks to become an occasion for a learning and, even, a wisdom that is religious, not in its captive, but in its utmost meaning.

The ideal graduates of Holy Cross should be characterized by a radical openness, a sense of wonder, and a deep humility before the inexhaustible richness of everything that is. They should have the ability to distinguish the different ways and methodologies of human knowing and to evaluate the levels of meaning. When in possession of meaning, they should be able to share and communicate it effectively. They should understand and be able to evaluate their own culture (its literature, art, and philosophy) both in its historical development and in its present structure. Moreover, they should have some familiarity with and appreciation of other cultures. Finally, they should recognize the need not only for dispassionate inquiry but also the more ultimate kinds of searching which necessarily involve the dedication of one's life and risk the very being of a person.

The graduates should be morally decisive in confronting life, courageous and hopeful in exercising initiative, yet loyal to legitimate authority. This will demand a positive-minded patience that is neither passivity nor abandonment of ideals. In response to the demands of the wisdom tradition which undergirds all cultures, a vocation further specified by the contemporary needs and potential of human society, they will be personally
dedicated and generously committed to creative involvement and leadership in the intellectual, social, cultural, religious life of the world.

As persons they should be so open in love to God and men of every race and creed, that they may combine sympathetic action in a pluralistic world with intense dedication to their own values and beliefs. They should continually grow in the consciousness that man is evolution and, by accepting the responsibilities of the human tenancy of place and time, stand ready to give their energies and their trust in the name of a future hope.

A Liberal Education ...

The College of the Holy Cross is committed to the excellence of the liberal arts for forming a well-educated person. The faculty and students of the College participate in an unhindered pursuit of truth, seeking evidence wherever it may be found, in nature, in reason, in revelation, and probing all the implications of truth, both speculative and practical.

A broadening curriculum in the arts and sciences is offered, wherein the student’s powers of reasoned analysis and synthesis are sharpened by mathematics, the inductions of the natural sciences and the deductions of philosophy; his understanding of man is broadened by great literature; a creative imagination is aroused and aesthetic awareness intensified by the fine arts and theatre art; communication is refined by a study of languages. History contributes a sense of time and timeliness; the social sciences, a consciousness of the factors shaping society; religious studies, the intellectual foundation for man’s relationship with God.

Combining this general curriculum with that degree of special competence students will need to enter upon careers of their own choosing, the College offers opportunities to major in biology, chemistry, classics, economics, economics-accounting, English, fine arts, history, mathematics, modern languages and literatures (French, German, Russian, Spanish, Studies in European Literature), philosophy, physics, political science, psychology, religious studies and sociology.

... in the Judaeo-Christian Tradition

While the ideals of a liberal education had their origin outside the Judaeo-Christian tradition, they have, in the West, grown up together and have again and again interpenetrated each other. The College, in its long history, has always attempted to encourage the kind of faith commitment that leads to seeing more and to discovering wider meanings in the context of a liberal education.

A continuing monument to the intellectual and spiritual labors of the Fathers of the Society of Jesus, who founded and guide the College, and to their personal dedication to the Christian faith, Holy Cross welcomes to full membership in its student body and faculty those of other faiths who share its devotion to the enterprise of a liberal education pursued with religious insight.
Affiliations

The College of the Holy Cross is a member of, or accredited by, the following educational institutions:


Admissions

Admission Procedure

All correspondence pertaining to admission to Holy Cross should be addressed to the Director of Admissions. No application for admission to the class entering in September will be accepted after February 1, except for compelling reasons.

All candidates must take the College Board Scholastic Aptitude Test and three Achievement Tests. These tests must be taken in November, December, January or March of the senior year in high school, preferably in November, December, or January.

Three Achievement Tests must be submitted by all candidates for admission. The English Composition Achievement Test is required of all candidates. The other two may be of the candidate's own choosing and preferably should be in subject areas in which the candidate plans to study on the collegiate level. They may be taken at any testing date that is con-
venient and appropriate but not later than March of senior year.

Applications will be accepted only from those students who have graduated from, or who are in the last year at, an approved secondary school and who offer sufficient proof of scholarly endeavor within the bounds of a college preparatory program at this approved secondary school. The Admissions Board will give preferential consideration to those applicants whose secondary school records give evidence of superior scholastic achievement, and who merit from their school officials recommendation for college entrance. The results achieved in the College Board Tests will also be a factor in the decision of the board. *It is the responsibility of the candidate to arrange that all College Board scores be sent to the Office of Admissions directly from the College Entrance Examination Board. All acceptances are made with the presumed condition that all senior year courses and examinations will be successfully completed.*

There is an application fee of fifteen dollars which must be sent by check or postal money order, along with the pre-application card, directly to the Office of Admissions. The fee is non-refundable and not applied to any college bill. Candidates accepted for admission to Holy Cross are required to forward a non-refundable deposit of two hundred dollars ($200). This deposit must be submitted by May 1 and is applied to the first semester bill. Candidates accepted for admission under the Early Decision Program must submit their deposit in January.

Application for admission to the College is encouraged of all academically qualified candidates regardless of their religious affiliation, race, sex, or national origin.

**Admission Requirements**

While the College does not demand specific academic unit requirements for admission, candidates must submit evidence of superior achievement within the framework of a program which prepares the candidate for the work of a liberal arts college. A program of this nature, customarily referred to as a college preparatory course, should emphasize study in English, mathematics, foreign language (ancient or modern), science, history and social studies. However, some deviation from this type of secondary school preparation may not necessarily disqualify a candidate for admission to the College since the Admissions Board is more concerned with the ability of the candidate to perform well in an intellectual endeavor than with the actual content of that endeavor. The Board also takes specific note of the individual talents and qualities of candidates as well as the extent of their extracurricular involvement. The Board then reviews all these facts in the light of the candidate's potential as a student and eventual graduate of the College.

Past experience has shown that most of the successful candidates have usually had a secondary school background which included the following units: foreign language (ancient or modern), 2 units in each of two languages or
3 units in one language; English, 4 units; mathematics, 3 units generally, 4 units for those candidates whose major would require the inclusion of college level mathematics as part of the required curriculum; history and/or social studies, 2 units; laboratory science, 2 units.

**Early Decision**

To superior students who have selected Holy Cross as their first choice among those colleges in which they are interested and who have taken the required College Board examinations in junior year, the College offers an Early Decision Program which allows them to submit an application prior to November 1 of the senior year. Under this Program, the Admissions Board will evaluate the application and inform the candidate of its decision no later than December 1.

The early decision candidate who will need financial aid should file a copy of the Parents Confidential Statement with the College Scholarship Service prior to October 15 in order that the candidate may be notified of any financial grant at the time of the admissions decision.

Should the decision of the Admissions Board be negative, the candidate need not re-apply but will be required to retake all College Board examinations during senior year as well as have an official transcript of 7th semester grades sent to college. The application will be given full consideration at the regular time.

The Admissions Board assumes that those candidates who apply to the Early Decision Program will definitely accept an offer of admission should it be tendered, provided it include adequate financial aid if such is needed. Consequently, while permitting the candidate to initiate other applications, the Admissions Board requires that, upon notification of acceptance to the College, all other applications be immediately withdrawn and a validating deposit fee of $200.00 be submitted in early January.

**Early Admission**

Through its program of Early Admission, by which outstanding candidates enter one year early, the College also welcomes the applications of superior high school juniors, recommended by their high school officials as having already attained a high degree of personal maturity and social adjustment. Such applications must be submitted prior to August 1. The required College Board Examinations must have been taken during the junior year of high school.

**Advanced Placement**

The College offers and encourages advanced placement for students suitably prepared. The College's policy presupposes that the candidate has pursued a strictly college-level course in the subject in which advanced placement is sought and has attained in the Advanced Placement Test of the College Board program a test score acceptable both to the Admissions
Board and the chairman of the particular department concerned. Normally the lowest Advanced Placement Examination grade acceptable for advanced placement or credit or both is a 3.

Admission of Transfer Students
Admission to the College with advanced standing is based on superior work completed at another institution. Students interested in transferring to Holy Cross should request transfer application material from the Office of Admissions. The application should be completed ordinarily prior to June 1, for the fall semester; prior to December 1 for the spring semester. Decision to accept a transfer-applicant will be based on evidence of a strong record in courses completed, favorable recommendation by a Dean of the College and two professors, and a personal interview if possible. The Admissions Board will inform the applicant of its decision shortly after the deadline for application.

In order to qualify for the degree from Holy Cross a student must complete four semesters at the College, including two full semesters of senior year.

Under exceptional circumstances, transfer students may be considered for financial assistance from the College during their first year.

Admission of Special Students
Application forms for admission to specific courses without enrolling for a complete degree program may be obtained by writing to the Office of the Registrar. Applicants should understand that most courses have limited enrollments with preference given to full-time degree candidates.

Freshman Orientation
Prior to the start of classes in September, a special program of orientation for new students is arranged by various campus offices and organizations. Information concerning the orientation program is forwarded to the students during the summer.

Program Of Studies
Planning a Program
Planning a program of studies which insures not only proficiency in a specific academic area but also exposure to several disciplines within the context of a liberal arts education is the primary responsibility of faculty advisors and students while at Holy Cross. Incoming students are assisted by Freshman Advisors and one of the Assistant Deans who early in the summer provides freshmen with extensive information.

Requisite for graduation will be the successful completion of thirty-two semester courses, four in each semester. (A semester course is a course of one semester duration for which three credits are ordinarily granted.) The curriculum is divided into two parts: the Major and Electives.
A MAJOR consists of a maximum of fourteen semester courses. Some departments may require specific courses in allied fields.

ELECTIVES may be chosen from allied or non-allied fields under the direction of the chairman of the department in which the student is to major.

The College of the Holy Cross offers a curriculum leading to the Bachelor of Arts (A.B. degree with majors in biology; chemistry, classics, economics, economics-accounting, English, fine arts, history, mathematics, modern languages and literature (French, German, Russian, Spanish, Studies in European Literature), philosophy, physics, political science, psychology, religious studies, and sociology.

Faculty Advisors

After the first year, students and their faculty advisors fashion a program of studies which is designed to insure progressive competency within a major and to be balanced by complementary courses in other disciplines. It is the role of the faculty advisor to meet with each advisee at regular intervals and to work in cooperation with the Assistant Deans and other officers of the College in reviewing academic decisions initiated by the student, e.g. choice of major (or change of major), course selection, interdisciplinary programs, special projects, and the like. The faculty advisor is also consulted by Deans, Department Chairmen, and others, in reaching decisions which will affect a student’s academic status.

Academic Policies

General

The college year is constituted of two semesters of sixteen weeks each. College curricular requirements are stated in terms of semester courses, but each such course is weighted, for purposes of computing averages, according to its semester hours of credit. Ordinarily each semester hour represents a class meeting once a week throughout a semester. In ordinary lecture courses, the class period is of fifty minutes duration; in laboratory work, the length of the period required for earning a semester hour of credit is at least twice the length of the ordinary lecture period.

Registration

Information and instructions concerning registration are distributed by the Office of the Registrar to all students approximately one month in advance of the beginning of each semester.

Formal registration takes place immediately preceding the opening of classes each term. Late registration and changes of course are permitted during the period designated by the Registrar. Freshmen are permitted to change courses in the Registration Period of the Fall semester only with the approval of the Assistant Dean (Freshman Class Dean). Withdrawal from a
course may be permitted during the first ten weeks of the term, with grades recorded as described on p. 15.

A normal program consists of four semester courses in each term. For good reason, a student may take a fifth course. However, registration for a fifth course will not be allowed until all students have chosen their four courses. Members of the Honors Program constitute an exception to this policy. They may register for a fifth course at the time of regular registration.

Failure to comply with the procedures specified by the Registrar for registration, changes of course, and withdrawal from a course, will result in either denial of credit or deficiency in the course.

Degree Requirements

The College offers two degrees in course: the Bachelor of Arts (A.B.) and the Master of Science (M.S.) in Chemistry.

The Bachelor of Arts degree includes up to a maximum of 14 courses in a major field, and the remainder in free electives, to a total of 32 courses. More details are found in later sections, under the several departments offering majors. All majors qualify for the Bachelor of Arts degree.

In order to qualify for a degree from the College, at least one-half of a student's courses, including the two full semesters of senior year, must be completed at the College of the Holy Cross.

The Master of Science degree, given only in Chemistry, requires 30 semester hours of credit and an experimental thesis; the program is described more fully on p. 34.

Early Graduation

While the normal length of time for the A.B. degree-program at Holy Cross is four years, a few undergraduates, in the past, have petitioned and received approval from the College for an accelerated program. This option, however, is normally limited to students who, at the end of freshman year, can base a request for early graduation on the following supportive grounds:

(a) successful completion of approved college-level courses prior to freshman year, or advanced placement from Holy Cross in three or more subjects;

(b) evidence of serious consideration as to the desirability of an accelerated degree-program and the counsel and encouragement of a faculty advisor and the Assistant Dean (Freshman Class Dean) in planning the scope and sequence of future course work;

(c) a distinguished record of academic achievement during freshman year.

Requests for an accelerated degree-program may be submitted at any time during freshman year or at the time of entrance to the College. Because approval of such a request rests upon evidence of prior determination and a carefully planned sequence of courses, requests will not, ordinarily, be con-
sidered after the end of freshman year. Final approval will not be granted until sometime after the completion of freshman year.

Students may submit requests through the office of the Assistant Dean. Final decision in the matter of early graduation rests with the Dean of the College.

Grading System

A student's standing will be determined by the results of examinations, classroom work and assignments. Each semester, only one grade will be submitted for each course for each student; this will be a composite grade for oral presentations, reading assignments, classroom discussions, tests, etc., and the final examination (which will normally carry one-third weight in determination of the composite grade).

Grades will not be translations of numerical scores, but will be estimated on the following bases: well-organized preparation and presentation of the subject matter; correct oral and written usage of English, successful completion of assignments, tests, readings, and examinations; application and participation in the classroom; imagination and initiative.

Reports of academic grades are sent to students, and to their parents or guardians, at the end of each semester, as soon as all financial obligations have been fulfilled.

Grades

The following symbols are used to indicate the quality of the student's work in each course:

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<tr>
<th>Symbol</th>
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<td>A</td>
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<tr>
<td>U</td>
<td>Unsatisfactory (&quot;Fail&quot;)</td>
<td></td>
</tr>
</tbody>
</table>
(The symbol J is assigned by the computer to indicate that a grade has not yet been submitted)

The grade AB is changed to F unless the Absentee Examination is successfully taken at the time appointed by the Registrar. The grade of I becomes an F unless a subsequent grade is submitted within one week of the final examination. Exceptions to these regulations will be granted only by the Assistant Deans, and only upon written petition by the faculty member.

Withdrawal from a course, with the approval of the Assistant Deans, after the period designated by the Registrar, will be graded WP or WF according to the judgment of the instructor. Withdrawal from any course after the tenth week leads automatically to a WF, as does withdrawal without approval at any time.

Quality Points

Each of the Grades from A to WF in the above list is assigned a multiplier, as indicated, which weights the grade in computing averages. Multiplying this weighting factor by the number of credit hours assigned to the course gives the quality points earned in it.

None of the other grades in the above list carry quality point multipliers; credits associated with such grades are not used in calculating averages.

Quality Point Index

Dividing the total number of quality points achieved in all courses by the number of credit hours assigned to these courses determines the Quality Point Index (Q.P.I.), or scholastic average.

The Semester Q.P.I. is calculated on credits and quality points earned in a single semester; when all the student's credits and quality points to date are used, the calculation yields the Cumulative Q.P.I.

The following criteria determine Honor Grades:

Dean's List — Dean's List status requires the passing of four or more courses with no failing grades during the semester and the following Q.P.I.'s:

First Honors: A semester Q.P.I. of 3.700 or above.

Graduation Honors —

Summa Cum Laude: A cumulative Q.P.I. of 3.870 or above.
Magna Cum Laude: A cumulative Q.P.I. of 3.700 to 3.896.

In calculations of the Q.P.I. for the Dean's List or for Graduation Honors, only those credits and quality points earned at Holy Cross (including those earned during Junior Year Abroad) may be counted.
Pass/Fail

The grades S and U are the “Pass/Fail” grades. Beginning with the 1973-74 academic year, the option of Pass/Fail grading will continue in effect only for those students taking five courses in a semester. The course taken on a Pass/Fail basis may not be within the student’s major field and may not be a course required in fulfillment of the student’s major.

Qualifications for Pass/Fail Option:

1. Students will make their selection of the course which they wish to take on a Pass/Fail basis *during the designated registration period*. A special Pass/Fail form must be filled out and filed officially in the Registrar’s Office.

2. The teacher involved will know the names of all students who have registered for a course on a Pass/Fail basis. The grades S or U will be assigned to the students by the teacher. Courses taken on a Pass/Fail basis shall not be counted towards the fulfillment of major requirements, if students change their majors.

3. Pass/Fail grades will not be averaged into a student’s Q.P.I., but will be placed on the student’s record.

4. If, during or after the designated registration period, a student withdraws from any of the four courses taken for a letter grade, a Pass/Fail registration in the fifth course will automatically be converted to a letter-grade course registration.

Fifth Course

Students, after consulting with their faculty advisor, may take a fifth course without charge for enrichment purposes. The following policies are in effect with regard to the fifth course:

1. Registration for a fifth course takes place only after all students have been registered for the normal four-course program. Students in the Honors Program are an exception to this policy. They may register for a fifth course at the time of regular registration.

2. A fifth course may not be used by students to advance their standing (i.e., a fifth course may not be used in fulfillment of degree course requirements or for the removal of deficiencies incurred in subsequent semesters, but may be used only for enrichment purposes).

3. Students who have incurred deficiencies through course failure in a given semester may not register for a fifth course in the subsequent semester.

4. Students who are on academic probation may not register for a fifth course.

5. A fifth course taken for a letter grade will be included in the calculation of the cumulative average for all purposes including the award of honors.

Requirements for Advancement

To be eligible for academic advancement a student must remove all
deficiencies and meet the minimum cumulative average requirements given in the next section.

**Academic Probation**

Academic Probation is not a penalty, but a warning and an opportunity for improvement; probationary status has a duration of one semester, and is determined by a student’s low cumulative average (Q.P.I.) at the end of the preceding semester, unless this has been sufficiently improved by success in an intervening summer session.

As soon as students are placed on or removed from probation, they will be notified in writing by the Registrar of such action; copies of the notice will be sent to their parents and advisors.

The following rules delineate the limits of academic probationary status:

**Freshman Year**

Any freshman having a cumulative average of 1.750 but less than 2.000 at the end of the freshman year will be on probation for the first semester of the sophomore year.

**Sophomore Year**

A sophomore with a cumulative average of 1.850 but less than 2.000 at the end of the first semester will be on probation for the second semester of sophomore year.

Students who have been dismissed because of a low cumulative Q.P.I. and whose appeal has been upheld by the Committee on Academic Standing are automatically placed on probationary status.

**Removal of Probation or Deficiency**

Probationary status is ordinarily removed by the achievement, the next semester, of the cumulative average required for that semester. Grades of C or better, earned in Summer Session courses at an accredited institution and approved in advance by the appropriate department chairman may be accepted in transfer by the College for the improvement of one’s Q.P.I. Credits and quality points accepted in transfer will be recorded on the student’s permanent record, and included in the calculation of his cumulative average, for all purposes other than the award of honors.

Each deficiency must be removed by a grade of C or better, earned in a Summer Session course approved in advance by the appropriate department chairman, in the summer immediately following its incurral. The credits attempted in the failed course will remain on the student’s transcript, and will be used in calculating the average; credits and quality points accepted in transfer to remove the deficiency will be recorded and used in calculation of the cumulative Q.P.I., except for the award of honors.

Deficiencies may not be made up by taking extra courses in subsequent semesters. An exception may be authorized by the Assistant Deans for
failure of a course in the first semester of senior year.

Academic Dismissal

Students will be required to withdraw from the College if they fail to achieve, at the end of any semester, the minimum quality point average specified above for probationary status, or if they acquire two or more failures (F, WF, or U) in any one semester, or if they acquire three or more failures during any academic year, or if they acquire a total of six or more failures at any time during their four years, even though some of the deficiencies may have been removed by attendance at summer session.

Any student who fails to maintain a 2.000 Q.P.I. at the end of all semesters after the third will be dismissed.

Any academic dismissal precludes the possibility of readmission before two full semesters intervene, during which time the student must have attended another accredited institution of higher learning.

Appeal procedures will be available to all students dismissed.

Appeal Procedures

1. Students dismissed for academic reasons may appeal their dismissal to the Committee on Academic Standing. The dismissal letter from the appropriate Assistant Dean will provide the student and parents with the necessary details of appeal.

2. The Assistant Deans are available for consultation regarding appeal procedures and will also inform the student of the final committee decision.

Readmission to the College

Students who have withdrawn in good standing and wish to be readmitted to the College must apply to the office of the Assistant Deans. All materials for readmission (completed application form, letters of recommendation, transcripts of any intervening work, statements of good standing and other substantiating documents that the Assistant Deans may require) must be in the hands of the Assistant Deans by September 1 for fall readmission and by January 1 for spring readmissions.

Students who have been dismissed from the College with the right to reapply and wish to be readmitted to the College must apply to the Registrar. All application materials requested by the Registrar (completed application form, letters of recommendation, transcripts of all intervening work, statements of good standing and other substantiating documents that the Registrar may require) must be in the hands of the Registrar by September 1 for fall readmissions and by January 1 for spring readmissions.

Readmission is not automatic, even for voluntary withdrawals, and may depend on the availability.

Voluntary Withdrawal from College

Students who withdraw voluntarily from the College are entitled to
separation in good standing under the following conditions:

1. They must not be liable to dismissal for disciplinary reasons.
2. They must not be liable to dismissal for academic reasons.
3. They must return all College property.
4. They must settle all financial indebtedness with the College.
5. They must properly notify the Assistant Deans of their intention to withdraw.

Leave of Absence

A student at the College is permitted to be absent from the campus for a period of one or two semesters provided the following conditions are met satisfactorily:

1. The request for a Leave of Absence must be made during the semester prior to the proposed leave, but may only begin at the end of a regular semester.
2. A student must be in good academic standing at the end of the last semester before the leave is to begin.
3. A Leave of Absence is normally granted for a one-year period of time. In exceptional circumstances (e.g., military service) the initial grant may be given for a longer period of time. If the leave is not renewed before the expiration date of the leave, the student will be withdrawn automatically.
4. The student is required to file in writing with the appropriate Assistant Dean his or her reason for requesting or for renewing a “leave of absence.”
5. A student on Leave of Absence must leave the College campus community and ceases to be entitled to campus activities.
6. A student on a leave, upon written notification to the appropriate Assistant Dean of his or her intent to return to the College, will be readmitted automatically.
7. A student on a Leave of Absence will be required to pay a fee of twenty dollars ($20) for each semester on leave.

Concurrent Registration in the Consortium

In 1967, the six four-year colleges and four two-year colleges in the Metropolitan Worcester Area formed the Worcester Consortium for Higher Education. Through cross registration, joint faculty appointments and curriculum projects, and other efforts, the Consortium explores ways of broadening academic programs for faculties and students as well as expanding continuing education opportunities and community service activities.

Students enrolled at the College of the Holy Cross may register for courses at Consortium institutions according to the procedures issued by the Registrar’s office at the beginning of each semester.

Summer Session Courses

Summer Session courses may be used for two purposes: (a) for enrichment (as with the fifth course during the academic year); (b) to remove
course deficiencies. The following policies are in effect with regard to Summer Session courses:

1. Summer Session courses taken for the purpose of enrichment or to remove course deficiencies must be approved in advance by the appropriate department chairman.

2. Summer Session courses may not be used to advance in course or to remove a subsequent course deficiency.

3. Only grades of C or better, earned in Summer Session courses at an accredited institution and approved in advance by the appropriate department chairman will be accepted by the College.

4. Summer Session courses accepted by the College will be recorded on the student’s permanent transcript and included in the calculation of the cumulative average, for all purposes other than the award of honors.

**Intersession Courses**

The following policies are in effect regarding registration of Holy Cross students for intersession courses at institutions belonging to the Worcester Consortium:

1. Since these courses take place during the study and exam period at Holy Cross, a student must first request that the faculty advisor submit a strong letter of support to the appropriate Assistant Dean.

2. Intersession courses may be taken only as enrichment courses, i.e., they may not be used as part of the four-course curriculum for a semester, nor may they be used to make up deficiencies.

**Transfer of Credit**

Acceptance of work done at other institutions will be affirmed promptly in writing, at the time of readmission, or of admission to advanced standing or advanced placement with credit. All such courses, credits, grades and quality points will be entered on the record at the time of acceptance. No renegotiation of such acceptances will be made at any subsequent time, after further work has been undertaken. Such transferred credits will be included in the calculation of the student’s average, except for the determination of semester or graduation honors.

**Transcript of College Record**

Transcript of college records are issued by the Registrar’s office. The transcript fee for students is $1.00 per copy.
The mission of the Air Force Reserve Officers Training Corps is to commission active duty officers to meet specific Air Force requirements through on-campus college programs.

Requirements for Enrollment: Enrollment is open to young men and women of good moral character and sound physical condition who are interested in the opportunities and challenges of a leadership position in a dynamic professional military service. In addition to Holy Cross students, students at the following Worcester Consortium institutions are eligible to apply:

- Assumption College
- Clark University
- Worcester Polytechnic Institute
- Worcester State College

AIR FORCE ROTC PROGRAMS
Two AFROTC programs are offered by the college:

Traditional Four-Year AFROTC Program:
1. General Military Course is required for freshmen and sophomores; one credit per semester.
2. Professional Officer Course is required for juniors and seniors; three credits per semester.
3. Summer Field Training of four weeks duration is required between the sophomore and junior years. Cadets will receive approximately $285 as salary during their training at an Air Force base.
4. Cadet Military Training of one hour per week is required for all cadets.
5. Free Flight Instruction is available for all qualified senior cadets interested in becoming Air Force pilots.
6. Scholarships for tuition costs are available to qualified students for their freshman, sophomore, junior and senior years. Applications must be made during the year prior to anticipated receipt of scholarship. Selection will depend mainly on three factors; scores on the Air Force Officer Qualifying Test; grade average (Quality Point Index) for all college work completed; and the assessment by a Scholarship Review Board. Entering freshmen should apply to AFROTC Headquarters Maxwell AFB, Alabama, during their...
senior year at High school. Details on the AFROTC scholarship program can be obtained from their high school counseling office.

7. Scholarship recipients, and all students enrolled in the last two years of the program, receive a tax-free stipend of $100 per month. The total value of these stipends ranges between $2,000 and $4,000.

New Two-Year AFROTC Program

1. A student with two years of undergraduate or graduate study remaining may apply in the academic year preceding those two remaining years. This is necessary to test the applicant, to process the application and test results, and to select the qualified candidates for AFROTC enrollment.

2. Summer Field Training of six weeks duration is required at an Air Force base prior to enrollment in the Professional Officer Course of the AFROTC curriculum. Students undergoing training receive a $460 stipend.

3. Students enrolled in the two-year program will take the Professional Officer Course; three credits per semester.

4. Scholarship opportunities, tax-free stipends, and flight training are similar to those of the 4-year program.

The General Military Course (GMC) is a two-year course:

AEROSPACE STUDIES 100 — A study of the doctrine, mission, and organization of the United States Air Force, with emphasis upon its role as a factor of national power. Two hours.

AEROSPACE STUDIES 200 — A study of U.S. and foreign military forces, with emphasis upon defense organization, strategy, and national decision making. Two hours.

The Professional Officer Course (POC) is a two-year course:

AEROSPACE STUDIES 300 — An in-depth review of the impact of the armed forces on American society with emphasis upon such topics as civil-military relations, the Armed forces as agencies of social change, and the role of ethnic minorities in the contemporary services. Six credit hours.

AEROSPACE STUDIES 400 — This course seeks to provide students with a systematic presentation of the principles, characteristics and functions of leadership and management. While some of the material presented relates uniquely to the military situation, the main emphasis of the course is essentially non-vocational. Six credit hours.
DEPARTMENT OF

Biology

Professors: Flavin (Chairman), Lingappa
Associate Professors: Crowe, Healy, McSweeney
Assistant Professor: Reynhout
Instructor: Johnston

The biology curriculum is designed to provide our majors a program with the scope and depth needed for entrance to graduate school and one which can be adapted to meet the diverse interests of potential biologists. All biology majors are required to take Biology 13, one course from each of the three areas by the end of sophomore year and four additional biology courses either from the area courses or any of the other courses. Biology majors must also take two semesters in General Principles of Chemistry with laboratory, two courses in Organic Chemistry with laboratory, two courses in General Physics with laboratory and a minimum of two courses in mathematics.

Area courses are as follows:

Area I:
- Biol. 16: Plant Science
- Biol. 65: Histology
- Biol. 104: Microbiology

Area II:
- Biol. 21: Introduction to developmental biology
- Biol. 54: Comparative chordate anatomy
- Biol. 61: General genetics

Area III:
- Biol. 59: Systematics and evolution
- Biol. 112: Population and community ecology
- Biol. 115: Introduction to the aquatic sciences

In addition, Biology 201-202 (Undergraduate research) and Biol. 203-204 (Biol. seminar) afford qualified students an opportunity to do research or literature study of a particular topic under the supervision of a staff member. Honors candidates must elect Biology 201-202.

BIOLOGY 11 — Cell Biology — Introduction to biology at the molecular and cellular level of organization. The processes of cellular absorption, excretion, growth, division, inheritance, differentiation, association, ageing, contraction, locomotion, energy transduction, conduction, photosynthesis and bioluminescence will be examined. The laboratory will be concerned with biological instrumentation and the func-
tional analysis of procaryotic and eucaryotic cells. Open to all students. Three lectures and one laboratory period. *Four credit hours.* (Offered 2nd semester).

**BIOLOGY 13 — Introduction to Biology** — Selected topics emphasizing basic biological principles as related to levels of biological organization. Three lectures and one laboratory period. *Four credit hours.* (Offered 1st semester).

**BIOLOGY 14-15 — Topics in Biology** — Reading and discussion of biological literature with emphasis on concepts rather than technical considerations. *Three or six credit hours.* (Offered both semesters. May be taken either or both semesters.)

**BIOLOGY 16 — Plant Science** — Origin of life and life processes, nature and development of plant life, and salient features of structure, function and development of organisms at all levels of Plant Kingdom will be presented. These will be supplemented with laboratory experiments to provide a basic understanding of plants and their life activities. Open to all students. Three lectures and one laboratory period. *Four credit hours.* (Offered 2nd semester).

**BIOLOGY 21 — Introduction to Developmental Biology** — An introductory study of developmental processes in animals and, to a lesser degree, in plants. Analysis of those factors and mechanisms which integrate and coordinate these developmental processes is included. Three lectures and one laboratory period. *Four credit hours.* (Offered 1st semester).

**BIOLOGY 54 — Comparative Chordate Anatomy** — A study of the anatomy, evolution and taxonomic relationships of chordates. Three lectures and one laboratory period. *Four credit hours.* (Offered 1st semester).

**BIOLOGY 59 — Systematics and Evolution** — A study of the concepts of modern evolutionary biology with emphasis on the various factors underlying the mechanisms of evolution. Three lecture hours and two laboratory periods. *Four credit hours.* (Offered 2nd semester).

**BIOLOGY 61 — General Genetics** — A study of the principles and mechanisms of inheritance and variation. Three lectures and one laboratory period. *Four credit hours.* (Offered 2nd semester).

**BIOLOGY 65 — Histology** — A study of the microscopic and submicroscopic structure of vertebrate tissues and organs. Three lectures and one laboratory period. *Four credit hours.* (Offered 2nd semester).

**BIOLOGY 101 — Biochemistry** — An introduction to the chemistry of the living state, including animals, plants and microorganisms. The course stresses basic chemical principles and molecular structure as groundwork for understanding cellular function and regulation. Laboratory is an integral part of the study and serves to introduce current experimental methods of biochemistry, emphasizing the chemistry of proteins, including characterization, methods of separation and enzyme induction. Prerequisite: Biol. II or 13, chemistry through organic with a grade of B or better in the second term, or consent of instructor. Three lectures and one laboratory period. *Four credit hours.* (Offered 1st semester).

**BIOLOGY 102 — Physiology of Cells and Tissues** — A study of those structures and functions common to most cells with a view toward integrating physiological function and biochemical mechanism, cellular architecture and molecular structure. Topics for consideration include the biochemistry of muscle contraction, the structure and function of membranes, the physical chemistry of nerve transmission and the like. Considerable attention is paid to the original scientific literature. Prerequisites:
Biology 101, or consent of instructor. Three lectures and one laboratory period. Four credit hours. (Offered 2nd semester).

BIOLOGY 104 — Microbiology — Origins and development of microbiology, principles and practices of microbiological methods, principle types of microbes, microbial metabolism and alternate pathways, nutrition, growth, genetic death and survival of microorganisms will be examined. Laboratory emphasis will be on pure culture methods and diagnostic procedures. Three lectures and one laboratory period. Four credit hours. (Offered 1st semester).

BIOLOGY 108 — Advanced Cell Biology — An empirical study of animal cells in single and aggregate isolation in vitro. Emphasis is placed upon system design for the study of specific problems in the fields of cytogenetics, cytochemistry, histogenesis and tumorigenesis. Three lectures and laboratory by arrangement. Four credit hours. (Offered 1st semester).

BIOLOGY 110 — Endocrinology — A study of the structure, function and secretions of the endocrine glands with special emphasis on the molecular aspects of hormonal action. Three lectures and one laboratory period. Four credit hours. (Offered 1st semester).

BIOLOGY 112 — Population and Community Ecology — Analysis of the interactions among members of the same population and among populations of different species. Open to all students. Three lectures and one optional laboratory period. Three credit hours. (Offered 1st semester).

BIOLOGY 115 — Introduction to the Aquatic Sciences — The course will be a general survey of the major aquatic habitats. The topics covered will include: the properties of water, the fundamental classification of habitats, the major physical and chemical variations in the habitats, the structure of biological communities. The emphasis of the course will be on the interaction of the physical, chemical and biological components in the formation of distinctive ecosystems. Prerequisites: permission of the instructor. Three lectures and one laboratory period. Four credit hours. (Offered 1st semester).

BIOLOGY 117 — Developmental Mycology — Broad questions of morphogenesis will be examined experimentally by studying life-cycles, metabolism and growth, sporogenesis dormancy, germination, sexuality, dimorphism and development in chosen examples of fungi. The emphasis will be on laboratory involvement and familiarity with physiological and molecular research techniques and research literature. Open to a limited number of students who have taken microbiology. Four credit hours. (Offered either 1st or 2nd semester).

BIOLOGY 118 — Biology of the Invertebrates — The course will be a survey of the development, structure, function, life cycles, ecology and evolution of selected invertebrate groups. A survey of the interrelationships of the range of invertebrate types will be followed by an in-depth treatment of those key groups for which adequate data are available on the above topics. The primary emphasis of the course will be a correlation of structure and function. Three lectures and one laboratory period. Four credit hours. (Offered 2nd semester).

BIOLOGY 119 — Ultrastructural Techniques — Instruction in the basic techniques for the preparation of biological materials for electron microscopy. Students will be shown the care and use of the electron microscope and ancillary equipment. A portfolio of micrographs of a tissue of the student's choosing will be assembled. Prerequisites: Biology 65 and permission of instructor. Class limited in size. Four credit hours. (Not offered 1973-74).
BIOLOGY 201, 202 — Undergraduate Research — This course involves an original and individual experimental investigation with associated literature study in one of the fields of biology under the supervision of a member of the staff. *Eight credit hours.*

BIOLOGY 203, 204 — Biology Seminar — An in-depth literature study of a particular topic under the supervision of a member of the staff. *Three credit hours.* each semester.
The curriculum of the Department of Chemistry is designed to provide students with sound training in the fundamental principles and basic techniques of the science rather than deal with specialized branches of the subject. Accordingly a student who wishes to major in Chemistry is advised to choose in his Freshman year Chemistry 13, 14 and 16. He is also advised to elect in his Freshman year Mathematics 31, 32. To continue in the Chemistry curriculum the student must obtain an average of C in Chemistry 13 and 14. The minimum further requirements for the student who wishes to qualify for the Bachelor of Arts in Chemistry and plans a career as a professional chemist are Chem 21, 22, 27, 55, 56 and 58 and two courses chosen from the 100 level courses. The student will confer with his departmental advisor regarding courses in mathematics, physics and modern languages. The curriculum of the Department of Chemistry has been approved by the Committee of Professional Training of the American Chemical Society. Those who desire A.C.S. certification are required to elect Chem 101, 104, 105, 107 and three other advanced courses. The normal course offering in the Chemistry Department includes 102, 103 and 106. By arrangement with the chairman of the departments involved a student may substitute an upper division course in physics, biology or mathematics for any of these courses. A student majoring in Chemistry who wishes to fulfill premedical requirements must take the following Chemistry courses: 13, 14, 16, 21, 22, 27, 53, 54, 57 and two upper division chemistry courses. The student will confer with his departmental advisor regarding required courses in mathematics, physics and biology. A student not majoring in Chemistry who wishes to fulfill premedical requirements or who plans on majoring in biology, can begin his chemistry requirements by electing Chemistry 11, 12 in his Freshman year. As noted above, a grade of C in these courses is the minimum acceptable grade for continuing in the chemistry curriculum. For the present, courses in organic chemistry, Chemistry 23, 24 and Organic Laboratory 25 and 26 complete the chemistry requirements for biology majors and premedical students.

Chemistry 11—General Principles of Chemistry I—The structure of matter is described by atomic and molecular theory in order to elucidate the nature and types of chemical bonding. Chemical calculations are thoroughly covered in the process of in-
vestigating stoichiometric problems, energy changes during reactions, and the behavior of gases. The laboratory introduces basic techniques while illustrating concepts discussed in lecture; some semi-micro qualitative analysis is included. As a prerequisite it is strongly recommended that the student have had high school courses in chemistry and physics, and have had better than average marks in high school mathematics. Three lectures and one (three-hour) laboratory per week. Four credit hours.

CHEMISTRY 12—General Principles of Chemistry II and Quantitative Analysis—A continuation of Chemistry 11, this course deals with such topics as physical and chemical equilibria, acid-base systems, and oxidation-reduction reactions. The laboratory introduces the student to proper analytical techniques, illustrates the foregoing principles, and provides practice in carrying through the necessary mathematical computations. Chemistry 11, 12 is a prerequisite for continuing courses in chemistry. It is required for majors in biology and other majors who wish to fulfill premedical requirements. Students majoring in biology or seeking to fulfill medical requirements must complete Chemistry 11, 12 with an average of C or better prior to admission to courses in Organic Chemistry. Three lectures and one (three-hour) laboratory period per week. Four credit hours.

CHEMISTRY 13—Structure and Bonding—This course is designed to present the student with a fundamental working knowledge of the modern theories of chemical bonding including both the valence bond approach and the more current molecular orbital approach as applied to bonding situations in compounds of the representative and transition metal elements. Basic stoichiometry and the development of atomic structure are included in this course. Three lectures per week. Three credit hours.

CHEMISTRY 14—Inorganic Chemistry—This course entails an investigation of the chemical properties of the representative elements and the transition elements. Group reactivity and chemical periodicity are stressed. The course makes full use of the subject matter developed in Chemistry 13 and introduces the basic concepts of chemical dynamics and equilibria. Three lectures per week. Three credit hours.

CHEMISTRY 16—Chemistry Laboratory—This laboratory course is designed so that the student can develop a sensitivity in recognizing distinctions in both the physical and chemical properties exhibited by physical systems. Qualitative identification and both classical and modern purification methods are treated in this course. In addition, certain selected stoichiometric experiments are included. One lecture and two four-hour laboratory periods per week. Three credit hours.

CHEMISTRY 21—Organic Chemistry I—This course is a study of Organic Compounds from two points of view: the chemistry of the functional group and modern structural theory and reaction mechanisms. The chemistry of aliphatic and aromatic hydrocarbons are studied in detail. Special emphasis is placed on stereochemistry and conformational analysis. Three hours of lecture per week. Prerequisite: Grade of C or better in Chemistry 11, 12 or 13, 14. Three credit hours.

CHEMISTRY 22—Organic Chemistry II—This course is a continuation of Chem 21. Alcohols, alkyl and aryl halides, aldehydes and ketones, organic acids and bases, and poly-functional compounds are discussed in detail. Three hours of lecture per week. Three credit hours.

CHEMISTRY 23—This course is essentially the same as Chemistry 21. The relationship of organic chemical reactivity to chemical structure is discussed in the light of reaction mechanisms. This course is required for biology majors and others
who wish to fulfill pre-med requirements. Pre-requisite: A grade of C or better in Chem 11, 12. Three lectures per week.

CHEMISTRY 24—This course is a continuation of Chemistry 23 and is similar to Chemistry 22 but with more emphasis on carbohydrates, amino acids and proteins. This course is required of all biology majors and others who wish to fulfill pre-med requirements. Three lectures per week.

CHEMISTRY 25—Organic Laboratory I*—This is the adjunct laboratory course of Chemistry 23 (and 24). In this first term the students learn various techniques of separation and purification of organic compounds. These include phase separations, various modes of distillation and crystallization. Determination of physical constants is also included. One hour of pre-laboratory instruction and one three-hour laboratory session. Two credit hours.

CHEMISTRY 26—Organic Laboratory II*—The emphasis in this second term is on organic syntheses, related to reactions studied in the lecture course. Several experiments are devoted to the qualitative determination of selected functional groups. One hour of pre-laboratory instruction and one three-hour laboratory session. Two credit hours.

CHEMISTRY 27—Synthetic Methods Laboratory*—This laboratory course is designed to acquaint the student with modern procedures for preparation, isolation and characterization of Organic and Inorganic compounds. Students are introduced to the use of the chemical literature. Basic concepts of U.V., IR, NMR and Mass Spectroscopy are discussed. One lecture and two four-hour laboratories per week. Three credit hours.

CHEMISTRY 41, 42—General Chemistry—This course is designed for students who are non-science majors, and it is intended to give them an insight into the material organic world around them. To do this the student will be first introduced to the language and theory of structural organic chemistry. The second half of the course will be devoted to technical developments of organic chemistry as well as natural products. Pre-requisite: A course in high school chemistry. Three lecture hours per week. Six credit hours.

CHEMISTRY 43—Creative Chemistry—This course is designed to present to non-chemistry majors the historical development of chemistry. The major chemical industries, their start and the principles involved in their development are discussed. Pre-requisite: A course in high school chemistry. Three lecture hours per week. Three credit hours.

CHEMISTRY 44—Chemistry and Society—An honors seminar designed to acquaint non-science majors with chemistry as a human endeavor. The relation between chemistry and environmental change will be analyzed in detail. Selected readings from the current scientific literature will be critically examined. Three lecture hours per week. Three credit hours.

CHEMISTRY 53, 54—Biophysical Chemistry I and II—A study of the basic concepts, principles and methods of physical chemistry and their application to biological systems. Theoretical and experimental aspects will be considered. Topics covered include molecular-kinetic theory, spectroscopy, thermodynamics, structure and properties of solutions, electrochemistry, kinetics, macromolecules and transport processes. An introductory knowledge of calculus is required. Three lecture hours per week. Six credit hours.
CHEMISTRY 55—Physical Chemistry—In this course a study is made of the fundamental principles and methods which the interested student can use as a base for the understanding of the structure and reactivity of the molecular world. Atomic structure, chemical, thermochemistry, entropy, free energy and the physical properties of gases are studied. A course in integral and differential calculus is a prerequisite. Three lecture hours per week. Three credit hours.

CHEMISTRY 56—Physical Chemistry II—This is a continuation of Physical Chem I and includes such topics as experimental study of molecular structure, rates and mechanisms of chemical reaction, liquids, electrochemistry and solids. Three lecture hours per week. Three credit hours.

CHEMISTRY 57—Biophysical Chemistry Laboratory*—This laboratory course is to illustrate some of the principles of biophysical chemistry, to train in careful experimentation, to develop the habit of quantitative interpretation of physical chemical properties and to encourage ability in research. One lecture and two four-hour laboratories per week. Three credit hours.

Chemistry 58 — Physical Chemistry Laboratory* — This laboratory course is designed to complement Physical Chem 55, 56. In the laboratory you will test the more important physical and chemical laws and in doing so acquire the habit for exact chemical techniques and the quantitative interpretation thereof. Experiments in spectroscopy, thermochemistry, electrochemistry, colligative properties, and phase equilibria are performed. One lecture and two four-hour laboratories per week. Three credit hours.

CHEMISTRY 100—Chemical Thermodynamics—This course develops the principles of chemical thermodynamics and includes applications. The fundamentals of statistical mechanics are also taught. Three lectures per week. Three credit hours.

CHEMISTRY 101—Advanced Inorganic Chemistry—This course is designed to give the student an advanced presentation of the modern concepts of bonding in inorganic chemistry. An introduction to quantum mechanics is given with emphasis on the symmetry properties of the compounds. The crystal field and ligand field approach to reaction rates and mechanisms of transition metal complexes in aqueous solution are also covered. Three lectures and one (three hours) laboratory period per week. Four credit hours.

CHEMISTRY 102—Advanced Organic Chemistry—Topics of interest from the current organic literature are discussed. Topics chosen in the past have been Oxidations, Photochemistry, Organo-metallic Chemistry, Woodward-Hoffmann Rules, configurational and conformational analysis, and the chemistry of Phosphorus, Boron and Sulfur. Pre-requisite: Chemistry 54 or 56. Three lecture hours per week. Three credit hours.

CHEMISTRY 103—Advanced Physical Chemistry—The goal of this one-semester course is to acquaint the student in a predominately non-mathematical treatment to molecular orbital theory, symmetry, and absorption spectroscopy as these topics relate to the structure, bonding, and reactions of a variety of molecular systems. Individual topics will include: Huckel MO Calculation; Symmetry, Point Groups and Character Tables; Woodward-Hoffmann Rules; and Electronic Absorption Spectroscopy. Three credit hours.

CHEMISTRY 104—Synthetic Organic Chemistry—This course will provide students of advanced Organic Chemistry with the scope, limitation, and stereo-
chemical consequences of selected groups of Organic reactions. Individual topics will be discussed in the light of specific syntheses taken from the chemical literature. Students will be expected to give a seminar based on a specific synthesis or a general synthetic method. Three lecture hours per week. Three credit hours.

CHEMISTRY 105—Instrumental Chemistry Lecture—This course presents an introduction to the theory and practice of instrumental analysis. Methods described involve atomic and molecular spectroscopy, chromatography, nuclear magnetic resonance, mass spectrometry, and electrochemical techniques. For each method, the theory, instrumentation, and applications are discussed; and an indication is given of the method's advantages and limitations. Three lecture hours per week. Three credit hours.

CHEMISTRY 106—Undergraduate Investigation in Chemistry—This involves an original and individual experimental investigation with associated literature study in one of the fields of Chemistry under the supervision of a member of the staff. Once a week the students meet with the staff and graduate students in seminar. Junior chemistry majors may begin their Senior research projects in second semester of Junior year. The culmination of any research project done under Chemistry 106 will be a research report to the advisor in the form of a journal article. Three credit hours.

CHEMISTRY 107—Analytical Methods*—In this laboratory, students acquire first-hand operating experience with the following equipment: atomic absorption spectrometer; infrared, ultra-violet, and visible spectrophotometers; polarograph; recording potentiometers; gas chromatograph; and nuclear magnetic resonance spectrometer. Experiments are designed to provide both qualitative and quantitative information, and to demonstrate a variety of analytical techniques. One lecture and two four-hour laboratories per week. Three credit hours.

CHEMISTRY 108—General Honors Research—Selections: Students interested in participating in the departmental honors program will be invited to submit applications to the departmental honors committee during the first semester of their Sophomore year. The committee will review the student's performance to date and determine whether the student could reasonably benefit from the program. The committee will accept applicants whom they feel qualify and defer decision on the others until the second semester of Sophomore year when more information will be available. The committee will meet again and make final disposition of all cases. (Students who did not apply first semester may make application second semester.)

Program: Selected students will consult with each member of the department on research and will submit to the committee a first and second choice for research advisor. When possible a student will be given his first choice. The student will then conduct with his research advisor an original research project culminating in a research thesis written during the last semester of his senior year. The thesis will be defended before the chemistry faculty. The student will be required to participate in the departmental seminar program.

Requirements: Students' records of performance will be evaluated each semester by the committee. Participants whose research or academic performance is inadequate will be dismissed from the program. Participants are expected to maintain an overall QPI of 3.0 and a minimum grade of B in major courses.

Course Credits: Students must register for Honors Research as a fifth course on a pass/fail basis for each semester they participate in the program. During the last semester they will register in Honors Research as a fourth course for credit. Students
who successfully complete this program will be graduated with "Honors in Chemistry."

*Each of these laboratory courses is taken as a fifth course. The course, while figured into the QPI, does not count toward the thirty-two courses required for graduation.
GRADUATE DEPARTMENT OF

Chemistry

Professors: Martus, VanHook
Associate Professors: McGrath, McMaster (Director), Ricci, Vidulich
Assistant Professors: Brown, Martin

The College conducts courses in chemistry for graduate students, leading to the Master of Science degree. Candidates must hold a baccalaureate degree from an accredited collegiate institution. An overall minimum quality point average of 2.5 is required (A=4.00). Candidates for admission should file applications with the Director before the fifteenth of March each year. In support of application each candidate should forward a transcript of his undergraduate record. Furthermore, the applicant should provide that letters of recommendation be supplied by two former college chemistry professors. In the case of successful applicants, a supplemental completed transcript with record of degree received, should be sent after graduation. In the evaluation of candidates, their admission into the Master’s program, and the awarding of teaching assistantships, no criteria are employed which are based upon the sex, race or creed of the applicant. Thirty course hours, of which ten are in research, are required for the degree. Students without the minimum number of undergraduate courses will have an opportunity to make them up. The residency is generally four semesters.

CHEMISTRY 200 — Chemical Thermodynamics — This course develops the principles of chemical thermodynamics and includes applications. The fundamentals of statistical mechanics are also taught. Laboratory work comprises experiments in advance physical chemistry with emphasis on thermochemistry. Required of all graduate students. Three lectures per week for one semester. Four credit hours.

CHEMISTRY 201 — Advanced Inorganic Chemistry — This course is designed to give the student an advanced presentation of the modern concepts of bonding in inorganic chemistry. An introduction to quantum mechanics is given with emphasis on the symmetry properties of the compounds. The crystal field and ligand field approach to reaction rates and mechanisms of transition metal complexes in aqueous solution are also covered in this course. This course will consist of three formal lectures and a fourth period devoted to an informal seminar in which current literature topics will be discussed. Four credit hours.

CHEMISTRY 202 — Advanced Organic Chemistry — Topics of interest from the current organic literature are discussed. Topics chosen in the past have been Oxidations, Photochemistry, Organometallic Chemistry, Woodward-Hoffmann Rules, Configurational and Conformational analysis, and the chemistry of Phosphorous, Boron and Sulfur. This course will consist of three formal lectures and a fourth period devoted to an informal seminar in which current literature topics will be discussed. Four credit hours.
CHEMISTRY 203 — Advanced Physical Chemistry — The goal of this one-semester course is to acquaint the student in a predominantly non-mathematical treatment to molecular orbital theory, symmetry, and absorption spectroscopy as these topics relate to the structure, bonding, and reactions of a variety of molecular systems. Individual topics will include: Hückel MO Calculation; Symmetry, Point Groups and Character Tables; Woodward-Hoffmann Rules; and Electronic Absorption Spectroscopy. This course will consist of three formal lectures and a fourth period devoted to an informal seminar in which current literature topics will be discussed. Four credit hours.

CHEMISTRY 204 — Synthetic Organic Chemistry — This course will provide students of advanced Organic Chemistry with the scope, limitation, and stereochemical consequences of selected groups of Organic reactions. Individual topics will be discussed in the light of specific syntheses taken from the chemical literature. Students will be expected to give a seminar based on a specific synthesis or a general synthetic method. This course will consist of three formal lectures and a fourth period devoted to an informal seminar in which current literature topics will be discussed. Four credit hours.

CHEMISTRY 211, 212. — Department Seminar — One hour per week. One credit for each semester. Total credit not to exceed two credit hours.

CHEMISTRY 213, 214 — Graduate Investigation in Chemistry — This will comprise an original and individual experimental investigation beyond the undergraduate level in one of the fields of chemistry, supervised by a member of the staff. Research can be continued through four semesters. Twelve credit hours.

FACULTY AND AREAS OF RESEARCH

EQUIPMENT FACILITIES
Major items of equipment to support the varied research activities include: Nuclear Magnetic Resonance Spectrometer, Recording Infra Red and UV-VIS Spectrophotometers, Vapor Phase Chromatographs, UV Flow Analyzer and Fraction Collector, Atomic Absorption apparatus and Fluorescence Spectrometer. Each professor has his own individual research laboratory, containing special equipment for his own and directed research. The Data Processing Center has an IBM 360-30 Computer available for students. Programmable calculators are also available.

ASSISTANTSHIPS
Teaching assistantships are available carrying a stipend up to $2,400 for ten
months and remission of tuition. Fellows will devote not more than nine hours per week as laboratory instructors.

FOR FURTHER INFORMATION

Write to:
Director, Graduate Division
Department of Chemistry
College of the Holy Cross
Worcester, Massachusetts 01610
The curriculum of the Classics Department is formed around two principles. First, the liberal arts college student should be given the opportunity to study the Greek and Roman sources of Western Culture. Thus, courses on the introductory, intermediate and advanced level in Greek and Latin are available to all students, as well as courses in Greek and Roman history, politics, religion, mythology and literature given in English. In the context of modern education, the Department recognizes its obligation to provide courses designed for the cultural development of the non-Classics major and its offerings reflect its efforts in this direction. Secondly, the student who intends to make the study of Classics his or her career is provided with a wide selection of courses, seminars and tutorials over his four years to give him an extensive background preparation in Greek and Latin authors for his graduate school. A minimum of ten courses are required for a major in Classics, suitably distributed between Latin, Greek and courses in English which are appropriate to an individual's major program. Depending on the student's background and interest, he may concentrate on one of the two languages with minimal requirements in the other. Ordinarily, major credit is not given for Latin 11 and Latin 12: Introduction to Latin. The Department is in a position to provide a uniquely personal approach to its majors and the details of their programs are determined accordingly. The Department of Classics offers two Classics Scholarships, The Henry Bean Classics Scholarships, to high school seniors with a distinguished academic record who plan to major in the Classics at Holy Cross. Candidates should address inquiries to Chairman, Department of Classics, College of the Holy Cross, Worcester, Massachusetts 01610. The following diagram illustrates the Advanced Latin and Greek language courses projected for the three academic years. It should be noted that courses on the introductory and intermediate level are offered every year. Advanced courses are ordinarily given in a three-year cycle.
LATIN

LATIN 11, 12 — Introduction to Latin — A grammar course introducing the student to the Latin language and Latin literature. Six credit hours.

LATIN 13, 14 — Intermediate Latin — For those who have had one or two years of Latin in the pre-college period. Six credit hours.

LATIN 120 — Roman Historians I: Sallust and Livy — A reading of selected books of Livy and the complete works of Sallust. Study of the sources and methods of Roman Historiography. A comparative study of the annalistic account of the regal and early Republican period and the archaeological data. Three credit hours.

LATIN 121 — Roman Historians II: Tacitus. Major or Minor Works — This course will study either the Annals or the Agricola and Germania of Tacitus in the original. Three credit hours.

LATIN 122 — Roman Oratory — Roman orations of Cicero in the original studied and analyzed rhetorically. Three credit hours.

LATIN 124 — Roman Satire I: Horace and Juvenal — The meaning and form of Roman satire is observed in the selected works of Horace and Juvenal. Three credit hours.

LATIN 125 — Roman Satire II: Petronius — A textual analysis of the Satyricon and its reflection of the reign of Nero and social, religious, and political developments in the first century A.D. Selections from Seneca and Suetonius will be considered as well as the influence of Petronius on later literature and art. Three credit hours.

LATIN 134 — Roman Philosophy I: Lucretius — An intensive examination of the poetic and philosophic message of Lucretius' Epicurean gospel, the De rerum natura. Three credit hours.

LATIN 135 — Roman Philosophy II: Seneca — A study of Roman Stoicism through a close examination of selected letters and dialogues of Seneca. One Senecan tragedy will also be included, with attention to the author's use of drama as a vehicle for philosophical indoctrination. Three credit hours.

LATIN 136 — Roman Philosophy III: Cicero — A study of Cicero's position in the Graeco-Roman philosophical tradition through an intensive examination of selections from his essays. Three credit hours.

LATIN 143 — Roman Lyric I: Horace — Selected poems from the four books of Odes will be read in the original. Emphasis will be placed on literary analysis and interpretation supported by a background study of the life, friends and historical times of Horace. Three credit hours.

LATIN 144 — Roman Lyric II: Catullus — A literary study and analysis of all the poems of Catullus. Three credit hours.

LATIN 150 — Patristic Latin — A study of the letters of Jerome and Sermons of Augustine and Leo the Great. Three credit hours.

LATIN 153 — Medieval Latin — A millenium of Late and Medieval Latin (374-1374), religious and secular. Selected readings from the chronicles, biographies, poems and satires. Three credit hours.
LATIN 158 — Vergil: Aeneid — A study in depth of Vergil's epic and its cultural, historical and artistic background. The last six books will be read in the original Latin. Three credit hours.

LATIN 159 — Elegories and Georgics — The development of pastoral and agricultural poetry in Rome as exemplified in Vergil's two poetic masterpieces. Three credit hours.

LATIN 163 — Roman Comedy — Selected plays of Plautus and Terence read in Latin combined with a study of Roman Comedy and its influence on later literature. Three credit hours.

LATIN 166 — Ovid — Selections from the elegiac verse of Ovid; a survey of the principal themes of the genre; the specific contributions that the poet made to the tradition; the continuation of the tradition in the love poetry of the Middle Ages. Three credit hours.

LATIN 167 — Elegiac — A study of the elegiac tradition in Roman poetry. The major representative authors will be read: Propertius, Tibullus and Ovid. Special emphasis will be placed on the conventions of the love elegy. Three credit hours.

LATIN 201, 202 — Tutorial Seminar — Designed for selected students with approval of professor and chairman. This work may be done for one or two semesters (three or six credits) and will take the form of either a survey of selected authors or a specialized study of a single author or period. Three or Six credit hours.

GREEK

GREEK 11, 12 — Introduction to Greek — A functional/inductive approach to the learning of ancient Greek through a study of the Greek text of the Gospel of St. John. This course leads to a second semester reading of the Greek text of a Classical author and/or the Greek New Testament, according to the individual's particular interest. (Recommended to students interested in Greek literature, English, Philosophy, Theology.) Six credit hours.

GREEK 13, 14 — Intermediate Greek — First semester: Readings and textual study of Greek prose authors. Second semester: Readings from the Poetry of Greece. (Offered mainly for students who have completed Greek 11, 12.) Six credit hours.

GREEK 125 — The Question of Socrates — A study of Plato's Apology, Crito and Phaedo supplemented by Xenophon's Apology and Memorabilia. Three credit hours.

GREEK 126 — Plato: Selected Dialogues — A study of selected Platonic Dialogues. The dialogues selected will vary but will not include those studied in Greek 125. Three credit hours.

GREEK 127 — Biblical Greek — This course is offered to students who have had at least an Introductory Greek course; selected texts from the Greek New Testament are
read and analyzed. *Three credit hours.*

**GREEK 143** — Lyric — Selections from Classical Greek poetry, exclusive of the epic and the drama. *Three credit hours.*

**GREEK 147** — Epic: Homer's *Iliad* — A reading of selected books of the *Iliad* with focus on the history of the text, the epic hero, and oral tradition. *Three credit hours.*

**GREEK 153** — Greek Historians I: Herodotus — An examination of selected passages from Herodotus' account of the Persian Wars. *Three credit hours.*

**GREEK 154** — Greek Historians II: Thucydides — A survey in depth of Thucydides' *History of the Peloponnesian War*. Extensive sections of historical and artistic significance will be read in the original Greek. *Three credit hours.*

**GREEK 168** — Hesiod/Homeric Hymns — A study of the Greek text of Hesiod, the *Theogony*, *The Works and Days*, the *Shield* and the important fragments. Also the corpus of the Homeric Hymns. Background material of Greek religion in the archaic age, the social and economic conditions of Greek peasant life and comparative passages from the *Iliad*, the *Aeneid* and Vergil's *Georgics* will be included. *Three credit hours.*

**GREEK 176** — Attic Orators — Selected speeches from the Attic Orators such as Antiphon, Andocides, Lysias and/or Demosthenes will be read in the original combined with a rhetorical analysis of them and a study of the historical and political events of the late 5th and 4th centuries B.C. *Three credit hours.*

**GREEK 178** — Patristic Greek — From the first four centuries of the Church’s literature, a special author or group of authors will be studied in detail with special attention to the political, religious and literary context of the period. *Three credit hours.*

**GREEK 183** — Greek Drama I: Aeschylus — A study of three plays of Aeschylus in the original with special attention to his role in the development of Greek drama in fifth century Athens. *Three credit hours.*

**GREEK 184** — Greek Drama II: Sophocles — The text of the *Life* of Sophocles and selected plays; investigation of the origin of the Greek theater and its physical structure; extensive investigation of 20th century literary criticism of Sophocles. *Three credit hours.*

**GREEK 185** — Greek Drama III: Euripides — An analysis of three plays in Greek, with special attention to the dramatic technique and "modern" views of Euripides. *Three credit hours.*

**GREEK 186** — Greek Drama IV: Aristophanes — Selected plays will be read in the original. Historical backgrounds, literary interpretation and study of the genre; comedy emphasized. *Three credit hours.*

**GREEK 251, 252** — Tutorial Seminar — Designed for selected students with approval of professor and chairman. This work may be done for one or two semesters (three or six credits) and will take the form of either a survey of selected authors or a specialized study of a single author or period. *Three or six credit hours.*

**GREEK 255** — Tutorial Seminar: Introduction to Greek — A study of Greek grammar combined with readings from the Gospel of St. John. This is a
beginning Greek course open to any student and especially to Classics, English, Theology and Philosophy majors. No pre-requisite. Three credit hours.

CLASSICS (no Latin or Greek required)

CLASSICS 127, 128 — Survey of Literature in English — The objective of this course is the attainment of a reasonable understanding and appraisal of Classical literature through the application of Classical theories of literary art to the major works of the major Greek and Roman authors. The first semester deals with Greek authors. The second semester deals with Roman authors. Six credit hours.

CLASSICS 129, 130 — Latin Literature in Translation — Late Republican and Early Imperial Literature and Art. Six credit hours.

CLASSICS 131, 132 — Roman and American Societies — A comparative study of the similarities and differences between Roman society and contemporary American society as seen through the extensive reading and discussion of ancient and modern historical and literary sources. Six credit hours.

CLASSICS 133 — Greek and Roman Drama — Selected plays of Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, Terence and Seneca. Three credit hours.

CLASSICS 134 — Greek and Roman Epic — Readings in Homer, Apollonius, Vergil and Lucan. Three credit hours.

CLASSICS 135, 136 — Greek Literature in English — A two-semester intensive survey of Greek literature. Six credit hours.

CLASSICS 137 — Women in Greek Literature — An introduction to such famous heroines as Helen of Troy, Penelope, Electra, Medea, Lysistrata. Reading of selections from the Iliad and Odyssey, and of plays of Aeschylus, Sophocles, Euripides and Aristophanes. Three credit hours.

CLASSICS 138 — Selected Greek Tragedies — A detailed study of selected Greek tragedies. Three credit hours.

CLASSICS 140, 141 — Ancient Political Thought — A study of the ancient literature concerning the state and its forms. The first semester will consider the evolution of political thought from its beginning in early Greek poetry to Aristotle and
Plato. The second semester will be devoted to Hellenistic political thought and Roman practices. Either course may be taken separately. **Three or six credit hours.**

**CLASSICS 142 — Greek Ethics** — A survey of the religious, social and philosophical foundations underlining ancient Greek conduct. **Three credit hours.**

**CLASSICS 146 — Roman Letter Writers** — A study of three distinct types of Latin epistolography, as exemplified in the letters of Cicero, Seneca and Pliny. **Three credit hours.**

**CLASSICS 148 — Master Ideas in Greek Literature** — Several key ideas that open up the spirit of Greek civilization and culture like the “heroic ideal,” the sanctity of the individual and humanism will be studied. Such authors as Homer, Pindar, Sophocles, Thucydides, Plato, etc., will be read to acquire a knowledge of the origin, development and influence of these ideas pointing toward the question: “What value has the Greek _apen_ today?” **Three credit hours.**

**CLASSICS 150 — Introduction to Roman Archaeology** — A study of the principal archaeological sites in Latium and Campania stressing the development of Roman Architecture and the growth of urban life. Readings in primary literary sources and inscriptions. **Three credit hours.**

**CLASSICS 151 — Mythology** — An exploration of the significance of myth, its meaning and functions in the cultures of Greece and Rome. Special attention will be given to more recent developments in the study of myths and their relation to rituals and folktales. Babylonian, Egyptian, Hindu and Germanic mythology will be used for comparative purposes. The most important literary sources for Greek and Roman mythology will be studied in detail. **Three credit hours.**

**CLASSICS 157 — History of Greece** — A study of Greek history from the beginnings to the death of Alexander. **Three credit hours.**

**CLASSICS 158 — History of the Roman Republic** — A study of Rome from the regal period to the Battle of Actium (31 B.C.) with emphasis on the political and social forces that culminated in a century of revolution (133-31 B.C.) and led to the establishment of the Principate. **Three credit hours.**

**CLASSICS 160 — Plutarch’s Works** — A study of selected biographies and passages from the _Moralia_ as reflections of the Greco-Roman experience. **Three credit hours.**

**CLASSICS 164 — History of the Roman Empire** — A survey of Roman imperial civilization from the principate of Augustus (27 B.C.) to the death of Diocletian (305 A.D.). The course will concentrate on the sources we have for this period: the historians, inscriptions, monuments and coins. **Three credit hours.**

**CLASSICS 171 — Ancient Literary Criticism** — A survey of Greco-Roman literary critics — Plato, Aristotle, Longinus, Horace, Quintilian — and their influence on European literature. **Three credit hours.**

**CLASSICS 173 — The Art of Ancient Rhetoric** — This course will attempt to study the effect of oratory or public speaking from the judicial and legislative...
system of Ancient Athens and Republican Rome as well as upon the other verbal arts. Three credit hours.

CLASSICS 190 — Greek Religion — A study of the main beliefs, movements, rites and practices of Greek religion from earliest times to the advent of Christianity. Three credit hours.

CLASSICS 191 — Roman Religion — Selected texts from Ovid, Cicero and Apulcius analyzed for an understanding of the religious forces present in ancient Rome. Three credit hours.

CLASSICS 201, 202 — Tutorial Seminar — Designed for selected students with approval of professor and chairman. Particular areas of classical civilization and/or literature can be studied for one or two semesters. Three or six credit hours.

CLASSICS 207, 208 — Classical Theatre Seminar — The content of this course changes each year. In Fall 1973, for example, the drama of the classical courtroom is investigated via a study and staging of a dramatic reading of Aeschylus' Oresteia and of a full production of Maxwell Anderson's play about Socrates' trial, Barefoot in Athens. Open to Freshmen and Seniors, with permission of instructor. Three or six credit hours.

CLASSICS 215 — Seminar in Ancient Epic (for non-majors only) — Intensive reading of texts (in translation) and historical and critical studies of the epic genre from Gilgamesh to the Song of Roland. Three credit hours.

CLASSICS 217 — Seminar in Greek Drama (for non-majors only) — Intensive reading of texts (in translation) of selected Greek plays dealing with a common theme, e.g. The House of Atreus. Reading and discussion of critical literature. Study of the archaeology and staging technique of Greek Theatre. Three credit hours.

<table>
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<tr>
<th>FALL</th>
<th>SPRING</th>
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| 1973-74 | Lat 122: Roman Oratory  
Lat 158: Vergil: Aeneid  
Gk 186: Aristophanes |
| 1974-75 | Lat 120: Sallust & Livy  
Gk 125: Question of Socrates  
Gk 143: Lyric |
| 1975-76 | Lat 144: Catullus  
or  
Lat 166: Ovid  
Gk 126: Plato  
Gk 176: Attic Orators |
| 1976-77 | Lat 125: Petronius  
Gk 127: Biblical Greek  
Gk 154: Thucydides  
Gk 147: Homer's Iliad  
Gk 150: Patristic Latin  
Lat 121: Tacitus: Major Works  
Gk 183: Aeschylus  
Lat 124: Satire I: Horace & Juvenal  
Lat 163: Roman Comedy  
Gk 127: Biblical Greek |
The curriculum of the department has been conceived with the one major objective of providing the student with as broad and well balanced an education as possible. Specialization is kept to a minimum. Course content is basically theoretical and aimed at developing the student's analytical and critical faculties, at stimulating his powers of interpretation, synthesis and understanding, and at training him to exact thinking. The emphasis is on the understanding of our economic system and on the analysis of its economic and business problems. The student is thus prepared to continue his education at the graduate level or to enter effectively into the business world. The curriculum is broadly integrated and in accordance with the liberal arts tradition.

The Economics Major

The minimum requirement for the economics major (including the premed economics major) is ten (10) semester courses in economics and two (2) semester courses in mathematics. (The maximum major is fourteen (14) semester courses in economics). The minimum major sequence is:

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Math 21, 22 (Intro. Calculus &amp; Prob.)</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Econ. 11, 12 (Principles)</td>
<td>2</td>
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<tr>
<td>Sophomore</td>
<td>Econ. 125, 126 (Micro/Macro)</td>
<td>2</td>
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<td></td>
<td>Econ. 152 (Statistics)</td>
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<tr>
<td>Soph.-Jr. or Senior</td>
<td>Economics Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

The department views additional electives in mathematics and computer science as desirable for the economics major, especially those students considering graduate work in economics and certain MBA programs. (See Information For Advisors and Students, 1973-74.)

Ideally, the economic major begins in freshman year; however, for the student who changes his major at the end of freshman year, the sequence of major courses may begin in sophomore year.

Economics majors may take as many as three (3) courses in accounting as
economics electives. However, accounting electives are restricted to the following: Economics 43, 44 and 147.

The Accounting Major

The requirement for a major in economics-accounting is ten (10) semester courses in accounting and law, six (6) semester courses in economics and two (2) semester courses in Mathematics (21, 22). Normally, the major in accounting will pursue the following sequence of courses:

<table>
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<tr>
<th>Year</th>
<th>Courses</th>
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<tbody>
<tr>
<td>Freshman</td>
<td>Financial and Administrative Accounting, 2</td>
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<tr>
<td></td>
<td>Mathematics</td>
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<td>2</td>
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<tr>
<td>Sophomore</td>
<td>Asset and Equity Accounting</td>
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<td>Principles of Economics</td>
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<tr>
<td>Junior</td>
<td>Cost and Advanced Accounting</td>
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<td>Money and Banking</td>
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<td>Statistics</td>
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<td>Corporation Finance</td>
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<tr>
<td>Senior</td>
<td>Business Law</td>
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<td>Federal Income Tax</td>
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<td>Auditing</td>
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<td></td>
<td>Economics Elective</td>
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However, the Money and Banking, Statistics, Corporation Finance requirement and economics elective may be taken in either the junior or senior year. Moreover, with special permission of the accounting faculty, students who begin accounting in their sophomore year may take Economics 131, 132 (Asset & Equity) and 161, 167 (Cost & Advanced) simultaneously in their junior year.

Non-Majors

Non-majors who have had Economics 11, 12 are able to elect most of the standard offerings within the department. However, Economics 43, 44, 121 and 147 do not require the Economics 11, 12 prerequisite.

Moreover, those students who wish a one semester course in Economics may elect either semester of the Principles of Economics. In general, the student desiring a one semester overview of economics is advised to take Economics 11 (Macro Principles). However, the Department strongly recommends the full year sequence in Principles, especially if the student plans to take additional electives in Economics which normally require the 11, 12 prerequisite.

Economics 43, 44 and 147 are the only accounting courses open to non-majors. (i.e. Economics 15, 16, 131, 132, 145, 146, 161, 163, 165, 266 and 167 are open only to Accounting majors.)
Advanced Placement in Economics

To any student from New York State achieving at least a C on the New York State College Proficiency examination in economics, the department offers advanced placement. Students seeking placement information should inquire in writing to the Chairman of the Department.

ECONOMICS 11, 12 — Principles of Economics — This course develops principles which explain the operation of the economy and suggest alternative policy solutions to contemporary economic problems. The first semester (macro) develops the principles of national income analysis, money, economic growth and international trade. The second semester (micro) establishes principles governing commodity and resource pricing under different market conditions and the distribution of income. Six credit hours.

ECONOMICS 15, 16 — Financial and Administrative Accounting — A study of the fundamental principles of accounting for proprietorships, partnerships, and corporations, and of the basic theory underlying these principles. The course also considers the managerial uses of accounting data in such areas as credit and investment decisions, choice of financing, expansion or contraction of operations, and establishment of dividend policy. Six credit hours.

ECONOMICS 43, 44 — Financial and Administrative Accounting — Same as Economics 15, 16. Six credit hours.

ECONOMICS 121 — Economic History of the United States — A critical study of the development of the American economy from Colonial days to the present, focusing attention on such areas as agriculture, labor and. iness to impnotogntm /ol l/ domestic commerce, transportation and communication, and the changing role of the government in economic life. Lectures, outside readings, book reviews. Three credit hours.

ECONOMICS 125 — Micro-Economic Theory — This is an analysis of the economic behavior of the household and the business sectors and their interrelations within the market. Price and resource allocations in the following market structures are considered: pure competition, monopolistic competition, oligopoly, monopoly and monopsony. The course concludes with a discussion of general equilibrium and the welfare implications thereof. Prerequisites: Mathematics 21, 22; Economics 11, 12. Three credit hours.

ECONOMICS 126 — Macro-Economic Theory — This course studies aggregate economic behavior as determined by interactions between the product, the money, and the labor markets. The variables focused upon are the general level of prices, of national income, and of employment. Applications of the theory are made and policy inferences are drawn with respect to business cycles, inflation, growth and development, and international trade. Prerequisites: Mathematics 21, 22; Economics 11, 12. Three credit hours.

ECONOMICS 131, 132 — Asset and Equity Accounting — A study in depth of the principles underlying asset and liability valuation and revenue and expense recognition. Other areas covered include correction of error of prior periods, preparation and use of funds statements, financial statement analysis, and the effects of price level changes upon financial reporting. Prerequisite Ec 15, 16. Three credit hours.
ECONOMICS 145, 146 — Business Law (Based on the Commercial Code). — Required of all students majoring in accounting. The course includes contracts, agency, sales, negotiable instruments, the legal aspect of business associations, insurance and property, both real and personal. Prerequisite: Economics 131, 132. Six credit hours.

ECONOMICS 147 — Accounting for Managerial Decisions — This course stresses accounting as a tool for managerial control. The course considers such subject as budgeting and the setting of standards, accounting systems and internal control, product costing and cost analysis, and the administration of standard costs and budgetary management and activity analysis or "linear programming" is also included. Prerequisite: Economics 43, 44. Three credit hours.

ECONOMICS 151 — Corporation Finance — After first considering the nature of the corporation and contrasting the corporation with other forms of business organization, this course then treats alternative methods of financing both long-term and short-term requirements for funds, characteristic financial policies and structures of important industry groups, functions of securities exchanges and the role of the promoter and investment banker in business finance. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 152 — Statistics — This course involves an analysis and interpretation of economic, business, and accounting data. Topics covered include descriptive statistics, sampling and inductive statistics, and regression and correlation analysis. Three credit hours.

ECONOMICS 153 — Money and Banking — This course investigates those economic principles governing the institutions of money, credit and banking. Special emphasis is placed on the control mechanisms of the central banking system and the integration of income and monetary theory. Specific applications of the theory are made to contemporary questions of macroeconomic policy. Prerequisites: Economics II, 12. Three credit hours.

ECONOMICS 154 — Advanced Statistics — This course includes study of the probability basis of statistical distributions; properties of important distributions; the general decision model; topics in statistical inference and analysis of variance. Prerequisite: Economics 152. Three credit hours.

ECONOMICS 155 — Managerial Economics — Topics included in this course are Decision Making, Forecasting, Demand and Supply, Management of the Product Variable, Price as a Tactical Weapon, Economic Bases of Logistics Analysis, Risk Management, Commodity Markets and Linear Programming Techniques. Prerequisite: Economics 125, 126. Three credit hours.

ECONOMICS 156 — Operations Research — This course is designed to acquaint the student with decision making, the application of mathematical and statistical techniques to economic and business problems. All models deal with optimization of an objective when there are constraints on available action. The linear programming and game theory techniques are treated in depth. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 158 — Public Finance — This course seeks to discern and appraise the effects of government financial policies. Basic principles and issues of government budgeting, spending, and revenue raising are investigated. Attention is also given to the problems of the public debt, fiscal policy and intergovernmental fiscal relations.
Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 161 — Cost Accounting — An introductory study of basic cost accounting principles, practices, and procedures, with a special emphasis on job order costs, process costs, standard cost, and estimated costs; managerial control through the use of cost accounting data and procedures; and special applications of cost accounting procedures. Prerequisite: Economics 131, 132. Three credit hours.

ECONOMICS 163 — Auditing — A study of the theory and practice of auditing and an examination of professional ethics. The laboratory work covers audit problems and a test audit of a small manufacturing concern. Prerequisite: Economics 161. Three credit hours.

ECONOMICS 165 — Federal Income Taxation — A study of the federal income tax laws as they affect individuals, partnerships, and corporations. Consideration is also given to the history of the federal income tax statutes and the methods of enacting tax legislation. Prerequisite: Economics 131, 132. Three credit hours.

ECONOMICS 167 — Advanced Accounting — Parent and subsidiary accounting relationships are studied and a critical analysis is made of the principles and postulates of accounting based upon the study of the Accounting Research Bulletins of the American Institute of Accountants and the Accounting Releases of the Securities and Exchange Commission. Research topics are assigned and reported upon. The course is organized on a discussion basis. Prerequisite: Economics 161. Three credit hours.

ECONOMICS 171 — Origins of Economic Analysis — This course considers the eighteenth and nineteenth century roots of the analytical tradition in economics. Concentration is on the major themes of Classical Economics: value and distribution theory, growth and development theory, monetary analysis, and the theory of economic policy. Moreover, each theme is appraised in view of its preclassical origins and its impact on later schools of thought. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 172 — Modern Economic Theories — This course studies the development of economic analysis from 1870 up to the present. Topics considered are, the Marginalist and Historical schools, Alfred Marshall and neo-classical economics, Mathematical economics, Economic Liberalism in the twentieth century, American Institutionalism, Imperfect Competition theories, and the development of Welfare Economics. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 173 — Comparative Economic Systems — The focus of this course is on the economic principles and issues involved with finding alternatives to the market economy. Capitalism is critically reviewed and evaluated, an historical sketch of the search for alternative economic systems is made, and three alternative models for Capitalism are examined: i.e. Authoritarian Capitalism, Authoritarian and Liberal Socialism. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 175 — Industrial Organization and Public Policy — This course presents an investigation of the basis of government-business relationships together with an historical development of control. It includes special problems of control relative to trusts, public utilities, transportation, extractive industries, exchanges and labor. Prerequisite: Economics 11, 12. Three credit hours.
ECONOMICS 178 — International Economics — This course is primarily a study of the theory of international trade. It is concerned with the theoretical basis for international trade, the determination of the terms of trade among nations, the price and income adjustment processes in a nation’s balance of payments and the effect of restrictions such as tariffs and import quotas upon a trade situation. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 181 — Economic Growth and Development — This course examines the theoretical and institutional factors influencing economic growth. Attention is given to various models of economic growth, the relation between social, political and economic institutions and the pattern of economic growth, the optimal public policy mix for economic growth and special problems of growth faced by the underdeveloped nations. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 183 — Urban Economics — Modes of economic analysis appropriate for analyzing the complex problems of the urban community are developed. Attention is focused on an increased understanding of the emerging policy issues facing cities. Special emphasis is given to the following: location and growth of cities; poverty and urban labor markets; social welfare and externalities; and policy formation for urban development. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 184 — Regional Economics — This course examines the theoretical constructs and practical aspects appropriate for the economic analysis of regions. Emphasis is placed on the following: industrial location theory; population and migration; income distribution; and the role of government in solving regional problems. Several analytical techniques will be covered including economic base method, interregional input-output analysis and linear programming. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 192 — Economics of Human Resources — This course analyzes the labor market in light of recent developments in economic theory. The following areas are explored: labor force participation studies, human capital theory, and marginal productivity theory. Interferences with the market through legislation, discrimination and labor unions and the interactions between the labor market and other sectors of the economy are considered. Prerequisite: Economics 11, 12. Three credit hours.

ECONOMICS 194, 195 — Industrial Relations — A critical examination of industrial relations in the American economic system, focusing upon the functions of management, labor and government, as these functions apply to the collective bargaining process. The course is of one year’s duration and offers a choice of outside work projects, independent research, and extra course work through the facilities of the Institute of Industrial Relations. Prerequisite: Economics 11, 12. Six credit hours.

ECONOMICS 197 — Mathematics for Economists — The object is to provide a mathematical background to students interested in pursuing a quantitative approach to economics or business. The following are considered: sets, functions and limits, differential and integral calculus, and matrix algebra. Applications are made to the set-theoretic approach to economic theory, extremum problems subject to constraints and general systems analysis. Prerequisites: Economics 125, 126. Three credit hours.

ECONOMICS 217, 218 — Freshman-Sophomore Economics Seminar — This program involves an accelerated, analytical development of the principles of economics in addition to student participation and discussion on selected works in the area of history of economic ideas and institutions. Six credit hours.
ECONOMICS 223 — Seminar in U.S. Economic History — Emphasis is placed upon the reading and discussion, in their historical context, of books and articles pertaining to controversial questions in American economic history, such as the tariff, land policy, antitrust policy, and fiscal and monetary policy. Prerequisite: Economics 11, 12. Permission of Instructor. Three credit hours.

ECONOMICS 225 — Welfare Economics — Pareto optimality conditions and the "principle of second best" are analyzed along with Bergsonian social welfare functions. Applications are made to the general area of social choice and individual values and then to more specific areas such as: public regulation and optimal taxation; education; health care; income transfers; pollution and natural resources. Prerequisites: Economics 11, 12, 125. Three credit hours.

ECONOMICS 259 — Problems in Public Finance — This course explores in depth the principles of analysis developed in Economics 58. Content of the course will include elements of advanced theory and intensive reading and student research into specific problem areas. Students will be free to pursue research within the field in line with their interests. Prerequisite: Economics 158. Permission of Instructor. Three credit hours.

ECONOMICS 266 — Federal Tax Policy Seminar — An inquiry into proposed reforms of the existing federal tax structure of the United States, emphasizing reform of the federal income tax upon individuals and corporations, and also considering changes in the taxation of gifts, trusts, and estates. Present tax law and suggested revisions will be reviewed in the light of the various objectives of tax policy. Prerequisite: Economics 165. Three credit hours.

ECONOMICS 272 — Contemporary Marxist Economic Analysis — This course examines the development of Marxian economics. Major concentration is on Marx's economics, its relation to the Classical tradition and Keynesian economics and its expression in contemporary modes of Marxist analysis concerning the operation and future development of capitalism. Prerequisites: Economics 25, 26 or By Permission. Three credit hours.

ECONOMICS 277 — Directed Readings in Economics — A program in reading and research open to qualified Economics majors. Three credit hours.

ECONOMICS 279 — International Economic Problems — This course will concentrate on selected problems in International Economics, e.g. the international monetary system: problems and policies; international trade and economic development; the theory of customs unions; and special topics in the theory of International economics. Prerequisite: Economics 178 and permission of instructor. Three credit hours.

ECONOMICS 283 — The Economics of Discrimination — Both microeconomic and macroeconomic frameworks are utilized to examine the impact of economic discrimination upon the allocation of resources in the product and factor markets. Resulting problem areas are critically examined including those of income inequities, housing, education, health and crime. Contemporary and radical economic solutions are evaluated. Prerequisites: Economics 11, 12. Three credit hours.

ECONOMICS 298 — Econometrics — This is a study of the use of statistical inference to test economic theory. Probability distributions, properties of estimators, multiple regression and correlation analysis, and simultaneous equation systems are
considered. A quantitative research paper is expected. Prerequisites: Economics 152, 197. Three credit hours.
To meet the needs of those students who wish to become secondary school teachers upon graduation or thereafter, the Department of Education offers a number of courses in education to sophomores, juniors, and seniors. Each student should consult periodically with the Chairman of the Department to plan the development of a course program. The program is, in practice, geared to the requirements for teacher certification on the secondary level. Students who are interested in the study of education but who do not plan on fulfilling the requirements for teacher certification are also encouraged to take courses offered by the department. Students seeking to complete requirements for certification must take at least one education course by no later than sophomore year and must identify their intentions to the department by that time.

EDUCATION 61 — Adolescent Psychology — Adolescence is considered from a developmental point of view with specific emphasis on the social, sexual, physical, psychological, intellectual and spiritual growth of the person from childhood to early maturity. Three credit hours.

EDUCATION 62 — Principles of Guidance — This course introduces the future teacher to the area of guidance and counseling in the schools. It is also geared to helping the prospective teacher decide about the area of guidance as a future specialization. The course explores, by means of reading and discussion, topics of current and perennial importance as areas of concern for the guidance worker. Three credit hours.

EDUCATION 67 — Educational Psychology — The student is introduced to relationships existing between psychology and education. Growth and development, the nature of the learner, the teaching - learning process, and the role of the teacher are studied. This course is a prerequisite for Education 272. New and innovative approaches to education will be discussed, particularly from a psychological point of view. Three credit hours.

EDUCATION 75 — Principles and Methods of Secondary School Teaching — The Methods of Teaching course experience will be grounded in a perennialist philosophy of education and hence will deal with the theory and techniques of humanistic education, values teaching, and the existential classroom. In an attempt to clarify contemporary education's obsession with reductionism and objectivity; the readings and experiences will emphasize wholeness, subjectivity, and intentionality. Three credit hours.

EDUCATION 78 — Curriculum Development — An introduction to the principles
of the secondary school. Curriculum considered historically, theoretically and practically. This course will follow a workshop approach and focus on problems facing the future student teacher. *Three credit hours.*

**EDUCATION 135 — Urban Education** — Survey of major issues affecting educational policies of urban areas, focusing on such problems as impact of education on poverty, compensatory education, school decentralization, school-community relations and alternative approaches to problems of education in urban areas. *Three credit hours.*

**EDUCATION 137 — Educational Sociology** — Consideration of the interrelations of family structure, community values and teacher behavior on the intellectual, social, and academic development of the individual. Special attention is given to educational issues stemming from minority group dynamics. *Three credit hours.*

**EDUCATION 200 — Special Topics in Education** — Tutorial and research projects designed by students and faculty members. Admission determined by evaluation of proposal. *Three credit hours.*

**EDUCATION 220 — Enrichment of Social Studies Instruction** — Analysis of new approaches of teaching social studies with emphasis on curriculum and strategies, problems of selection and organization of content, instructional materials and teaching styles, including teaching unit construction and evaluative procedures. This course is designed for seniors who are student teachers in the social studies. It will be geared to fit their needs. *Three credit hours.*

**EDUCATION 268 — Philosophy of Education** — This course is designed as an introduction to educational theories. The range of concern includes: education and the fields of knowledge; education in nature and society; education in the school; ultimate questions about the nature of man and of the cosmos. *Three credit hours.*

**EDUCATION 272 — Student Teaching** — A strictly supervised program, for selected students, of observation and teaching in a secondary school. Education 67 and Education 75 are prerequisites. This course will be counted as two ordinary college courses. *Six credit hours.*
English

Professors: E. F. Callahan, Dorenkamp (Chairman).
Assistant Professors: R. Burke, Dailey, French, Geracht, Madden, Teichgraeber, C. Wall.
Instructors: George, Hathaway, Winslow.
Lecturer: Donaghy.

English is central to liberal education. It deals with materials from all ages and concerns itself with one of the most important functions of man, the control of language. It attends not only to the use of language in works of the imagination — poems, plays, novels, short stories, etc. — but also to the use of language as a rhetorical tool. The English department offers the student the opportunity to expand his knowledge of the way language has been used and to develop his own skill in the use of language.

Upper division electives available to sophomores, juniors, seniors and Advanced Placement Freshmen present differing approaches to the study of literature. Thus the student may elect courses consonant with his interests and vocational needs leading to graduate study, law, medicine, business or other fields. A major portion of the courses emphasize the development of critical judgment based upon a sound understanding of the historical tradition. Opportunities also are provided for the student to increase his mastery of creative interests through a series of elective courses in writing.

The student majoring in English will in the course of his or her years at Holy Cross take ten to fourteen courses in English. Although not required to do so, first year students will ordinarily take introductory courses in fiction, drama, or poetry. As sophomores, juniors and seniors, they will take a minimum of ten courses (English major pre-medical students take eight), including at least one course in five of the following six areas:

1. Medieval Literature
2. Renaissance Literature
3. Restoration and 18th century Literature
4. 19th century Literature
5. American Literature before 1900
6. Shakespeare

Students are free to select any of three to five courses in each of these areas to meet the requirement. They may choose their remaining English courses from any of the numerous departmental offerings except those specified as being for non-majors only.

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All English majors are required to take two semesters in classics prior to graduation. It is strongly recommended that this requirement be undertaken as early as possible in the student's career and must be completed prior to the second semester of the Senior year.

English majors with permission of the chairman and the schools involved may undertake courses at other schools in the Worcester Consortium. Courses taken in this cooperative venture count fully toward the completion of the English major.

Each semester the English department offers approximately 25 different courses from which the student may choose. These courses vary greatly. Some are courses in historical periods of English and American literature, e.g., Middle English Literature, 20th century American Literature; some are courses organized according to literary type, e.g., Chaucer, Shakespeare, Milton. Still others are arranged thematically, tracing a unifying element across chronological, generic and national lines, e.g., Tragic View, Literature and Myth. Some study the nature and workings of language, e.g., Introduction to Linguistics; others concentrate on developing skill in the use of language, e.g., Fiction Writing, Verse Writing, Expository Writing.

In addition to the usual classes the English department also provides on occasion opportunity for independent study through reading courses, tutorials, and guided research.

In all, the department aims to produce knowledgeable, informed students familiar with the development of English and American literature and able to read and write critically and analytically.

FRESHMAN HONORS
In cooperation with the Honors Program, the English Department offers annually a Freshman seminar on a particular subject, literary approach, or period in English or American literature. An announcement of the subject is made in the Special Studies bulletin distributed in the summer preceding the student's Freshman year. Application for this Honors seminar is effected through the Office of Special Studies. Acceptance into the program is announced by the seminar teacher after consultation with the English Department.

ADVANCED PLACEMENT
The English Department participates in the national and college Advanced Placement Programs. Prior to the student's entrance into the Freshman year, the department consults advanced placement scores, high school preparation, and college entrance scores to determine the level of English advisable for the student to take in the Freshman year. Students granted advanced placement receive three hours credit and may elect upper division courses (English 100-199) in their Freshman year.
ENGLISH 11 — Advanced Composition — A course devoted to improving the student's writing ability through frequent writing and rewriting. Classes are made up of a maximum of ten students. Intensive work during the semester concentrates on the student's own writing examined both in class and in conference with the instructor. Three credit hours.

ENGLISH 12 — Introduction to Fiction — A course that studies various forms of prose fiction. The student will read extensively in a variety of sources and sharpen his critical ability through class discussions. Writing critical papers is an important part of this course. Three credit hours.

ENGLISH 13 — Introduction to Poetry — A course to develop the student's ability to understand and analyze poetry. It deals with various poetic forms as well as with the language of poetry. Writing critical papers is an important part of this course. Three credit hours.

ENGLISH 14 — Introduction to Drama — A course that studies the drama as literary form and statement. By concentrating upon a close reading of the text and examination of dramatic technique, it develops the student's understanding of the medium. Writing critical papers is an important part of this course. Three credit hours.

ENGLISH 40 — Freshman Honors Seminar — A one semester seminar for advanced students on a subject designated each semester by the teacher involved. Application to this course is made through the Office of Special Studies. Three credit hours.

ENGLISH 102 — Anglo-Saxon Literature — A survey of the writings in England between the 7th and 11th centuries; beginning with the Anglo-Latins, and progressing through the popular, courtly, religious, and heroic traditions in poetry. The literature is read in translations, but provision is made for students with a reading knowledge of Anglo-Saxon. Three credit hours.

ENGLISH 106 — Middle English Literature — A study of Troilus and Criseyde, Gawain and the Green Knight, religious and secular lyrics and other texts of the 13th and 14th centuries. Three credit hours.

ENGLISH 107 — Medieval Literature — A study of major texts of medieval literature both English and continental, most of which are read in translation. Three credit hours.

ENGLISH 108 — Chaucer — A reading and critical discussion of the complete text of The Canterbury Tales with subsidiary studies in the minor works. Three credit hours.

ENGLISH 110 — Renaissance Prose — A study of prose forms characteristic of the intellectual climate of the English and Continental Renaissance. Three credit hours.

ENGLISH 111 — Renaissance Poetry — A survey of the major poets of the English Renaissance from Skelton to the Metaphysicals and Cavaliers. Three credit hours.

ENGLISH 112 — Literature of the English Renaissance — A study of sixteenth and early seventeenth century literature, excluding drama, in England, this course considers both prose and poetry written in English with attention paid to major continental influences. Three credit hours.
ENGLISH 114 — English Drama to 1642 — A study of the English drama from its beginning until the closing of the theatres in 1642. Three credit hours.

ENGLISH 116 — Shakespeare Survey — A one semester survey of the major works of Shakespeare, examining them as representative of the stages in Shakespeare's dramatic development. Three credit hours.

ENGLISH 117 — Shakespeare's Elizabethan Drama — A careful study of Shakespeare's drama prior to 1600. Major attention will be focused upon the Chronological Tetralogies. Corollary studies in the tragedies will be undertaken also. Three credit hours.

ENGLISH 120 — Shakespeare's Jacobean Drama — A close analysis of Shakespeare's dramas from Hamlet to The Tempest. Emphasis will be placed upon stylistic development and Shakespeare's addressing himself to problems of the Jacobean age. Three credit hours.

ENGLISH 125 — Milton — This course proceeds from a study of Milton's early poems to the readings of Paradise Lost, Paradise Regained, and Samson Agonistes. Certain prose pamphlets are read either in their entirety or in selections. Three credit hours.

ENGLISH 130 — Restoration and Eighteenth Century Literature — A study of the major English writers from the time of the Restoration until the publication of Lyrical Ballads. Three credit hours.

ENGLISH 131 — Restoration and 18th Century Drama — The course will survey drama from Dryden to Sheridan, including heroic drama, Restoration comedy, sentimental developments of the 18th century, and the reemergence of laughing comedy. Attention will also be paid to relevant intellectual background and influences. Three credit hours.

ENGLISH 132 — Dryden, Pope and Swift — A study of the literature from the Restoration to the death of Pope with major emphasis upon the writings of John Dryden, Jonathan Swift, and Alexander Pope. Three credit hours.

ENGLISH 135 — Johnson and the Late 18th Century — This course acquaints the student with Collins, Gray, Boswell, Johnson, Christopher Smart, Macpherson, Churchill, Walpole, Goldsmith, Sheridan, Beattie, Chatterton, Cowper, Burns, Crabbe, Burke, Paine, and Blake. Three credit hours.

ENGLISH 137 — 18th Century Novels — A close examination of the novel as formal prose narrative. Novels by Defoe, Fielding, Richardson, Smollet, the Gothic novelists, Sterne and Austen are considered in detail. Collateral reading is also required. Three credit hours.

ENGLISH 141 — English Romantic Literature — A study of the major writers of the Romantic movement: Wordsworth, Coleridge, Byron, Shelley, Keats, Hazlitt, De Quincey, etc. Three credit hours.

ENGLISH 145 — Major Victorian Authors — A study of representative poems of Tennyson, Browning, Arnold and Hopkins; the prose of Arnold and Carlyle; with attention on important changes in critical theory and poetic taste during the period. Selections from Macaulay, Mill, Ruskin, Pater, Rossetti, Swinburne and Hardy will be also examined. Three credit hours.

ENGLISH 147 — 19th Century Novels — A close examination of the novel as a
formal prose narrative. Novels by Thackeray, Dickens, the Brontes, Eliot, Butler, James, and Conrad are considered in detail. Collateral reading in Scott, the Gothic novelists, Meredith, Trollope, Hardy, and others is also required. **Three credit hours.**

**ENGLISH 149 — Special Topics in English** — A course offered from time to time devoted to a special problem or aspect of literature or language. **Three credit hours.**

**ENGLISH 150 — Modern British Literature** — A survey of the major British poets and novelists since 1914. Concentration will be on the works of Yeats, Auden, D. H. Lawrence, Joyce, Aldous Huxley, and the new generation of writers since the close of World War II. **Three credit hours.**

**ENGLISH 151 — Modern British Poetry** — The major Modern British Poets dating from Hardy, Yeats, Eliot, and Auden will be examined in detail as representative of the directions in British poetry during the 20th century. **Three credit hours.**

**ENGLISH 157 — Modern British Novel** — A study of the British novel and its development from Galsworthy to Braine. **Three credit hours.**

**ENGLISH 163 — American Literature to 1836** — A study of the development of American literature with emphasis on the late 18th and early 19th centuries. **Three credit hours.**

**ENGLISH 164 — Hawthorne, Melville and Twain** — The detailed analysis of the major works of Hawthorne, Melville and Twain as representative of the writers, the literary tastes and the general cultural movements of the time. **Three credit hours.**

**ENGLISH 165 — American Literature in the Age of Emerson** — A study of the times and contemporaries of Ralph Waldo Emerson. Readings from Emerson, Thoreau, Hawthorne, Melville, Poe and Whitman. **Three credit hours.**

**ENGLISH 170 — American Literature in the 20th Century** — A survey course in the developments in American literature from the late years of the Genteel Tradition to the present day. **Three credit hours.**

**ENGLISH 171 — Modern American Poetry** — A close analysis of the development of American poetry from the late 19th century to the present. Representative poets will be examined. **Three credit hours.**

**ENGLISH 172 — Contemporary Fiction** — A critical examination of contemporary fiction by British and American writers such as: Kingsley Amis, John Barth, Anthony Burgess, Elizabeth Bowen, John Hawkes, Joseph Heller, Doris Lessing, Norman Mailer, Brian Moore, Iris Murdoch, Thomas Pynchon, etc. **Three credit hours.**

**ENGLISH 173 — Contemporary Poetry** — A critical examination of contemporary poetry by British and American poets such as: Robert Bly, Allen Ginsberg, Thom Gunn, Phillip Larkin, Denise Levertov, Robert Lowell, James Merrill, Vassar Miller, Sylvia Plath, etc. **Three credit hours.**

**ENGLISH 174 — Contemporary Drama** — A critical examination of contemporary drama by British and American playwrights such as: Edward Albee, Kenneth Brown, Samuel Beckett, Brendan Behan, Robert Bolt, Shealahg Delaney, Jack Gelber, Lorraine Hansberry, John Osborne, Harold Pinter, N.F. Simpson, Arnold Wesker, etc. **Three credit hours.**

**ENGLISH 177 — Modern American Novel** — A study of the development of the modern American novel from the close of the 19th century to the present. Representative works of Wharton, Dreiser, Norris, Dos Passos, Hemingway, Faulkner and
others are closely studied for an understanding of their artistic accomplishment and the milieu in which they are written. **Three credit hours.**

**ENGLISH 178** — Black Literature in America — A study of Afro-American Literature during the 19th and 20th centuries. The course will focus upon an analysis of the relationship between Black Literature and the traditional theories of American Literature through close literary analysis of representative texts. **Three credit hours.**

**ENGLISH 180** — Survey of English Literature to 1660 — A survey history of English literature from the time of *Beowulf* to the end of the Puritan Commonwealth. Representative works will be analyzed in their relationship to the development of English literature, as well as reflections of their milieu. **Three credit hours.**

**ENGLISH 181** — Survey of English Literature from 1660 - To the Present — A study of the major writings in English literature from the Restoration to the present. Emphasis is placed on literary, cultural and historical movements and their effect on the literature of the time. **Three credit hours.**

**ENGLISH 182** — Problems in Teaching English — An examination of special problems encountered in teaching English literature and language at the secondary level. **Three credit hours.**

**ENGLISH 184** — Modern Drama — The focus of this course will be drama since 1890, principally in England. Attention will also be given, however, to developments in the theater, on the continent, and in the United States. **Three credit hours.**

**ENGLISH 185** — Twentieth Century Irish Literature — A survey of the developments in the poetry, drama and fiction of modern Ireland from the Gaelic Revival to the present. Attention will be focused on Yeats, Joyce, O'Casey, and Synge among others. **Three credit hours.**

**ENGLISH 186** — Principles and Practice of Writing: Verse — A study of the techniques of verse for either critical or creative purposes through the study of representative forms of poetry (e.g., sonnet, ballad, ode, villanelle, rondeau, etc.) and of meters, diction, imagery, and other elements of poetic technique. Practice in composition of representative forms and opportunity for individual creative work will be provided. **Three credit hours.**

**ENGLISH 187** — Studies in the Novel — An inclusive, but non-historical survey of the various approaches to the novel as a literary form. **Three credit hours.**

**ENGLISH 188** — Expository Writing — A course designed to instill in the student the habit of clear, precise expository writing by considering the principles of organization, development, etc., and putting them into practice. **Three credit hours.**

**ENGLISH 189** — Principles and Practice of Writing: Short Fiction — A study of the techniques of fiction for either critical or creative purposes through the study of representative forms of short fiction (e.g., anecdote, *novella*, allegory) and of point-of-view, setting, structure, image, diction, plot, characterization and other elements of fictional technique. Practice in composition of representative modes and opportunity for individual creative work will be provided. **Three credit hours.**

**ENGLISH 190** — Tragic View — A study of the theory of tragedy in dramatic and non-dramatic literature. Readings in Greek tragedians, Latin and Continental, as well as English and American literature. **Three credit hours.**

**ENGLISH 191** — Comic View — A study of the theory of comedy in drama and other literary forms from the Greeks to the present day. **Three credit hours.**

**ENGLISH 192** — Satiric View — A study of the concept of satire as it is found in all
literary forms from the classical writers to the present day. *Three credit hours.*

**ENGLISH 194 — Literature and Myth** — A study of the mythical bases of selected representative works and an investigation of the current analytical approach referred to as myth criticism. *Three credit hours.*

**ENGLISH 195 — Literary Criticism** — A study of the major critical movements from Aristotle to the present. *Three credit hours.*

**ENGLISH 197 — Problems of Rhetorical Analysis** — A systematic study of classical and modern systems of rhetorical analysis of expository prose. *Three credit hours.*

**ENGLISH 198 — Introduction to Linguistics** — A study of important developments in language study in the 20th century especially in the areas of phonology, usage, grammar, lexicography, etc. *Three credit hours.*

**ENGLISH 199 — Comparative and Historical Linguistics** — The emphasis of the course is on linguistic geography, linguistic borrowing, the causes of linguistic change, the comparative method and reconstruction, and problems in analyzing languages with and without literary tradition. *Three credit hours.*

**ENGLISH 200 SECTIONS — Special Approaches** — The designation 200 refers to the method in which the subject is pursued on either a seminar, tutorial or independent study basis. Students desiring to undertake such studies must first receive the permission of their departmental advisor and then the recommendation of the mentor of the project prior to the submission of a detailed prospectus to a departmental committee for final decision.

**ENGLISH 300** — This category designates courses offered which cross departmental lines.
The Fine Arts curriculum is deliberately designed as an integral part of the liberal arts program of the College rather than as a terminal training program for professional work. Its aim is to increase student sensitivity to the visual arts, to refine the powers of critical analysis in the same arts, and to provide the student with visual means of creative expression. It follows that those who seek professional competency would be expected to pursue the field in graduate school; it is also to be concluded that the courses are not limited to those majoring in fine arts. They are open to all students, in some cases as a minor related to their major field, and in all cases as free electives.

Requirements for the major:

a) Emphasis on Studio
   F.A. 121, 122 Studio Drawing
   F.A. 101, 102 History of Western Art
   Six semesters in studio courses.

b) Emphasis on Art History
   F.A. 141, 142 Studio Painting.
   Six semester courses in art history.
   Students who plan to apply to graduate schools in art history should be aware that they will be expected to have competence in modern languages.

FINE ARTS 101 — History of Western Art I — The development of the arts from ancient civilization to the early Renaissance. There will be an initial emphasis on Greek art. This is followed by a consideration of the art of the Roman, Early Christian, Romanesque and Gothic eras. Fifteenth century Italian art is studied as a “renaissance” of the classical tradition, and the inception of the modern world-view. Three credit hours.

FINE ARTS 102 — History of Western Art II — A study of the major trends in the history of Western art. The Italian High Renaissance is contrasted with the attitude of Northern European art. The diversity of the Baroque period culminates in both the Rococo and Neo-Classicism. Nineteenth century Romantic art is followed by a Realist revolt and the emergence of Impressionism. The course concludes with a con-
sideration of the major artistic movements of the twentieth century. *Three credit hours.*

FINE ARTS 107 — Theories of Art Criticism (Seminar) — A study of the intrinsic and extrinsic perspectives essential for an understanding of Western art history. The artist, the individual work, and the social and cultural context are investigated as interrelating factors in the analysis, interpretation and evaluation of the visual arts. *Three credit hours.*

FINE ARTS 108 — The Painter in the Modern World — The development of painting as the central medium of visual expression in the Western world is investigated through the study of six major artists, from Caravaggio to Cezanne. Each artist will be considered in terms of the development of his career, his contribution to the art of painting, and his influence on the cultural and social ideals of Western society. *Three credit hours.*

FINE ARTS 111 — History of Oriental and African Art — A basic understanding and knowledge of Oriental art (China, Japan, Korea, Central Asia, Southeast Asia, and India), from the third millennium B.C. to the present. Aimed not only at clarifying the information from this area of study but also at discussions of its problems. Due to the vast range of the subject, it is hoped that the student will develop an understanding of the broad course of Eastern history, and especially how the art of the area reflects that history. Also the traditions and backgrounds necessary for an understanding of African art. *Three credit hours.*

FINE ARTS 113 — History of American Art — A depth course covering architecture from its colonial beginnings to the recent developments of Wright, Johnson, Saarinen and others. In the fields of sculpture and painting, the major artists from the early limners, through the Federal and later eclectic periods. Also the various movements from 1945 to the present are considered in their ideological and aesthetic roots. *Three credit hours.*

FINE ARTS 116 — History of Modern Painting — Beginning with the revolt of David from the previous academic traditions, this course traces the multiple movements and ideologies that have taken place in the last century. The emphasis in the course is on the many painting styles and underlying philosophies, but modern sculpture and architecture are also treated. *Three credit hours.*

FINE ARTS 119 — Fundamentals of Visual Experience I — The course is designed to develop knowledge about and experience in art appreciation, intended for students without previous extensive background in the visual arts. Non-historical in approach, this course investigates the basic functions, styles and structures of Western art, with emphasis on how the elements of the visual arts and their organization effect the viewer’s perception. *Three credit hours.*

FINE ARTS 120 — Fundamentals of Visual Experience II — A continuation of Fine Arts 119, this course concentrates on two basic issues: the interaction of medium and meaning in a work of art, and the theory and practice of art criticism. Related issues in the course are: the relation of art to society and ideas; the meaning and role
of the artist; the interrelation of the arts; art as environment; the future of art: Three credit hours.

FINE ARTS 121, 122 — Studio Drawing — This course is designed for beginners and emphasizes the development of basic drawing skills. Special projects are directed toward interpreting reality in traditional modes of expression. The second semester is designed for students who have demonstrated competence in basic drawing skills and techniques. Projects deal with the drawing of the human figure in a variety of media and styles. Six credit hours.

FINE ARTS 131, 132 — Printmaking — A course for beginners that investigates methods of creating multiple images in a variety of print media, including, serigraphy, lithography, etching, block printing, and collagraphy. The second semester continues the study of all print media and provides for the exploration of one media in depth with strong emphasis on experimentation. Six credit hours.

FINE ARTS 141, 142 — Studio Painting — A course primarily for beginners which explores the organization of two-dimensional space in terms of line, form, color, and texture. Projects involving objective, non-objective, and abstract forms are undertaken in a variety of painting techniques. The second semester continues the development of spacial organization with a greater emphasis on the development of painting style. Six credit hours.

FINE ARTS 152 — Watercolor — The various techniques of transparent watercolor, gouache, and related water soluble media are explored in depth. Stress is placed on the unique qualities of the watercolor technique within the framework of the individual's personal creative development. Previous formal art training is not required. Three credit hours.

FINE ARTS 161 — Basic Sculpture — A studio course which introduces the student to a creative understanding of three-dimensional design, form, and the control of materials and tools involved. Personal expression is encouraged through the use of a variety of media including clay, plaster, wood, metal, and plastics. Basic casting and carving techniques are introduced. Three credit hours.

FINE ARTS 162 — Stone Carving/Wood Carving/Casting — Continues individual development and understanding of three-dimensional design and form while concentrating on the techniques wood carving, stone carving, and/or casting in plaster, cast stone and terra cotta. Stone carving and wood carving offered alternate years. Prerequisite: Fine Arts 161. Three credit hours.

FINE ARTS 164 — Ceramic Sculpture — Continues individual development and understanding of three-dimensional design and form while concentrating on the technical problems involved in making ceramic sculpture. The student becomes familiar with hollow building, coil and slab construction and wheel thrown work as well as learning firing procedures and glazing. Prerequisite: Fine Arts 161. Three credit hours.

FINE ARTS 166 — Metal Sculpture — Continues individual development and
understanding of three-dimensional design and form while concentration is on the various metal techniques of hammering, forming, fusing and construction. Construction and fusing will be done at a variety of temperatures ranging from soft soldering up through silver soldering to welding and brazing. Prerequisite: Fine Arts 161. *Three credit hours.*

FINE ARTS 170 — Contemporary Cinema and Humanism — A film seminar directed toward an investigation of the cinematic treatment given the many-sided problems confronting modern man. Approximately ten representative contemporary films, both foreign and domestic, are closely and critically studied for an understanding of their artistic accomplishment and their director’s place in the history of the cinema. *Three credit hours.*

FINE ARTS 180 — Structure of Music — This course is designed primarily for students without previous musical training. It is aimed at an understanding of music as an aural experience, and does not require the ability to read music or to perform it. The training consists in listening to, and understanding certain compositions which illustrate the most important techniques used in Western music. *Three credit hours.*

FINE ARTS 181, 182 — Fundamentals of Music I — This two semester course is designed for students without previous musical training who wish to pursue the study of music on a more serious level. The course includes the writing of elementary counterpoint and harmony in various traditional styles. It also includes an introduction to the piano, since a modest competence is necessary as an aid for further studies in music. *Six credit hours.*

FINE ARTS 183, 184 — Fundamentals of Music II — This two semester course is a continuation of the previous one, which it has as its prerequisite. It will include the study of, and exercise in, advanced harmonic practices and counterpoint (all based on actual works), as well as the influence of these practices on formal procedures in Western music up to the present. *Six credit hours.*

FINE ARTS 185 — Twentieth Century Music (offered in alternate years) — An investigation of the major techniques of the music written in this century, and of their relationship to previous procedures. This investigation will be carried on in terms of actual compositions, heard either in performance or through recordings. Prerequisite: ability to read music, or permission of instructor. *Three credit hours.*

FINE ARTS 186 — Keyboard Music: Frescobaldi to Bartok (offered in alternate years) — An investigation of the principal procedures used in the composition of works for the harpsichord, organ and piano during this period, through actual performance of the works themselves or through recordings. Prerequisite: ability to read music, or permission of instructor. Offered Fall '73. *Three credit hours.*

FINE ARTS 187 — Music and Words — (offered in alternate years) — An historical survey of Western music, particularly in terms of music which is texted — such as that written for the liturgy, lieder, opera, the madrigal, etc. — in all of which
the shape of the music is influenced by words. Prerequisite: F.A. 180, or permission of instructor.

FINE ARTS 188 — Opera as Drama — (offered in alternate years) — A one semester course devoted to an examination of opera as a composite form. Attention is focused upon its major developments from the close of the 18th century to the present. Representative operas of Mozart, Verdi, Wagner, Puccini, Strauss, and Berg are examined in order to determine the directions and resources employed in the evolution of modern opera following the Baroque period. Offered Spring '74. Three credit hours

FINE ARTS 189 — Music of the Medieval Era and the Renaissance — (offered in alternate years) — The study of the development of Western music, both sacred and secular, from Gregorian Chant to the end of the 16th century. This repertory is best understood through performance in class; necessary musical training, therefore, such as the reading of scores, the recognition of pitches, rhythms, etc., will be offered in the course itself. Prerequisite: F.A. 180, or 181, 182, or permission of instructor. Three credit hours

FINE ARTS 190 — Variations — (offered in alternate years) — An investigation of the history of music in the Western world, through a study of variation techniques. Styles, or ways of composing, will be studied through an analysis of music using variation techniques from early medieval music to the present. Prerequisite: F.A. 180, or permission of instructor. Three credit hours

FINE ARTS 191 — The Music of Haydn and Beethoven. (offered in alternate years) — This course will deal with the music of the above composers with particular emphasis on the art forms new to the Classical period, i.e. the symphony, the string quartet, and the piano sonata. Classroom discussion will be based on listening assignments and selected reading. Prerequisite: F.A. 180, or 181, 182, or permission of instructor. Three credit hours.

FINE ARTS 192 — The Operas of Mozart, Verdi and Wagner — (offered in alternate years) — Three different conceptions of opera and operatic method will be studied in detail with particular emphasis on Mozart’s Don Giovanni, Verdi’s Othello, and Wagner’s Tristan and Isolde. Prerequisite: F.A. 180, or permission of instructor. Three credit hours.

FINE ARTS 193 — The Music of Schumann, Chopin, and Brahms — (offered in alternate years) — The music of the above composers will be discussed with an attempt at separating those aspects of their style that represent a continuation of the Classical tradition from those that are new to the Romantic Era. Prerequisite: ability to read music, or permission of instructor. Three credit hours.

FINE ARTS 194 — Chamber Music — (offered in alternate years) — A one semester course devoted to the investigation of works for small ensemble (one singer or player to a part). Examples will be selected mainly from the instrumental literature of the 17th through the 20th centuries. Three credit hours

FINE ARTS 195 — The Music of Monteverdi, Handel and Bach — (offered in alternate years) — A study of baroque music through an investigation of major works of the three most important composers of the baroque era — with special reference to their dramatic compositions. Prerequisite: F.A. 180, or permission of instructor. Three credit hours.

FINE ARTS 196 — Music of the Baroque Era — (offered in alternate years) — A study of the most important developments in musical style from the beginning of the
17th century to the middle of the 18th century. Works for thorough analysis will be drawn from the music of such composers as Monteverdi, Scarlatti, Vivaldi, Handle, Bach, etc. Prerequisite: F.A. 180, or permission of instructor. Offered Fall '73. Three credit hours

FINE ARTS 197 — Fugal Procedures Through Analysis — (offered in alternate years) — A study, through selected compositions from the 18th, 19th, and 20th centuries, of the most demanding structural procedure in the history of Western music. Prerequisite: three music courses, or permission of instructor. Three credit hours

FINE ARTS 198 — Music of the Classical Era — (offered in alternate years) — The rise and development of the Viennese classical style as reflected in the chamber music, piano sonatas, and symphonies of Haydn and Beethoven, and in the operas and concertos of Mozart. Prerequisite: ability to read music, or permission of instructor. Offered Spring '74. Three credit hours

FINE ARTS 199 — Music of the Romantic Era. (offered in alternate years) — This course will deal with musical compositions in the 19th century after the death of Beethoven. The repertory will be studied with special emphasis on those stylistic features that represent a continuation of the Classical tradition, and those that point the way to the revolution in musical thought in the 20th century. Prerequisite: ability to read music, or permission of instructor. Three credit hours.

FINE ARTS 221, 222 — Advanced Studio Drawing — A course that emphasizes the use of drawing in expressing ideas and concepts of today's world. Special studio projects designed by the students include all drawing media. Prerequisite: Fine Arts 121, 122. Six credit hours

FINE ARTS 241, 242 — Advanced Studio Painting — This course continues the student's development in the major painting techniques and encourages experimentation in some of the less common modes of visual expression. Emphasis is placed on the development of personal technical skills. Traditional and contemporary styles of painting become a vital part of the student's growth through individual projects and investigation. Prerequisite: Fine Arts 141, 142. Six credit hours

FINE ARTS 261, 262 — Advanced Sculpture — Continues and expands individual development and understanding of sculptural form using contemporary and traditional approaches. Personal expression is encouraged through advanced techniques of media previously used as well as the use of new media. These include metal, ceramics, stone, wood and casting. Individuals may propose projects and choose suitable techniques. Prerequisites: Fine Arts 161, and either Fine Arts 162, 164, or 166. Three credit hours

FINE ARTS 281, 282 — Special Projects — Tutorial work under department direction for students who have normally completed advanced courses in their chosen area of specialization. Six credit hours

FINE ARTS 300 — Special Topics in the History of Western Music — (offered in alternate years) — The stylistic and structural analysis of a specific type of musical composition (e.g., setting of the Kyrie or of the Gloria of the Mass) common to all periods of Western music from Gregorian chant to the 20th century. Prerequisite: three music courses, or permission of instructor. Offered Spring '74. Three credit hours

FINE ARTS 301, 302 — Tutorials.
FINE ARTS 303 — Musical Form and Analysis — (Freshman Honors Seminar)
— The group will study the formal procedures commonly used by Western composers between 1450 and 1950. It will study the principles of harmony, texture, rhythm, organization of musical detail as it varied in different historical periods resulting in different styles. Ability to read music and some knowledge of music theory is required to participate in the course. *Three credit hours*
Historical knowledge provides the means of understanding another age of society or a culture other than one’s own, of entering fully into the life of the past, of knowing its presuppositions, outlook and spirit, and of learning how to interpret it. History establishes perspective as a defense against excessive “presentism,” frees us from preconceptions, and enables us to place ourselves, in the atomic and space era, in relation to other individuals, societies and ages. Basically humanistic, with all civilization for its province, by its very character history is the bridge between the humanities and the sciences. To major in history, students must have a minimum of eight one-semester courses in history, exclusive of freshman courses. In addition, they must see to it that among these courses are at least two one-semester courses in American History and at least two in European History. A maximum of fourteen semester courses may be taken in history, including freshman courses. All freshmen who choose to take a course in history enroll in a special course, History 1, 2, History 3, 4, or History 13, 14. Only Freshmen who have qualified for Advanced Placement may take history courses other than these. Seminars may be taken only by history majors who have completed at least four semester courses in history, exclusive of the freshman courses. Students are afforded opportunities to participate in seminars and research projects by arrangement with the department.

HISTORY 1, 2 — Conference course for Freshmen. — A reading and discussion course in which small groups of students study in depth selected topics and themes in history. Meeting once each week for an extended period, this course seeks to develop a sense of history. Six credit hours.

HISTORY 3, 4 — Introduction to History for Freshmen. — A course in which freshmen study in depth selected topics and themes in history. One lecture and one discussion period each week. Six credit hours.

HISTORY 13, 14 — Europe Since The Renaissance. — A study of the significant developments in European History from the Renaissance to the present time. Six credit hours.

HISTORY 15, 16 — History of the United States. — A survey of American political, social, and cultural history from the earliest settlements to the present. The
first semester ends with the Civil War. Six credit hours.

**HISTORY 41, 42 — Medieval History.** — An examination of Western History from the decline of the Ancient World until the Renaissance and Reformation era, with emphasis upon political, social and economic developments. Six credit hours.

**HISTORY 43, 44 — The Early Middle Ages.** — A close examination of the historical and institutional changes which saw medieval Europe evolve from a late Roman foundation. Christianity, Roman civilization, and the Germanic invader are studied with the objective of understanding their critical interaction and its influence upon the new beginnings of Western man. Six credit hours.

**HISTORY 45, 46 — The High Middle Ages.** — The apex in the emergence of the “First Europe,” 1050-1300. Special emphasis will be placed upon the development of institutional monarchy, urbanism, the Crusades, intellectual and artistic creativity, the medieval university, and the Church, with geographic focus on continental Europe. Six credit hours.

**HISTORY 47, 48 — Renaissance and Reformation.** — A study of the major political, intellectual, religious, and cultural currents in Europe between 1350 and the Thirty Years’ War. Six credit hours.

**HISTORY 49 — Europe in the Seventeenth Century.** — An exploration of the century of almost ceaseless revolution — the Thirty Years’ War, the Fronde in France, the Civil Wars in England, revolts in the Low Countries, Spain and Italy; the general and pervasive crisis will be examined according to various theories of historical causation in a comparative framework. Three credit hours.

**HISTORY 50 — Europe in the Eighteenth Century.** — An analysis of the society, thought, and political structure of Europe before the “dual revolution” (the French and Industrial Revolutions) with emphasis on the diverging patterns of Western and Eastern Europe. Three credit hours.

**HISTORY 51, 52 — Europe in the Nineteenth Century.** — This course will emphasize the Napoleonic Era; the Congress of Vienna; Political and Social Revolutions; the Unification of Germany and Italy; Russia; the British Empire; Social Theories. Six credit hours.

**HISTORY 53 — Europe in the Twentieth Century I** — Although this course will focus on the major political events of this century, social change and cultural trends will also be discussed. Topics receiving special emphasis are: the origins of World War I, the Russian Revolution, democracies facing reform and reaction, the rise of political anti-Semitism and the establishment of fascist dictatorships in Germany and Italy. Three credit hours.

**HISTORY 54 — Europe in the Twentieth Century II.** — Starting from a discussion of the Nazi State, the following topics will be covered: the Spanish Civil War; the diplomacy of appeasement; the Nuremberg analogy; the origins of the Cold War and atomic diplomacy; liberation movements against Russia, Great Britain, and France; the politics of the Common Market; and the second “European Renaissance.” Three credit hours.

**HISTORY 59 — Intellectual History of 19th Century Europe.** — In this course the intellectuals’ response to industrial, urban society will be examined. Romantics sought escape from it; socialists plotted its overthrow; nationalists dreamed of transcending it; sociologists analysed it; and novelists described it in careful detail. Among the
DEPARTMENT OF

History

Professors: Corcoran, Kealey
Associate Professors: Brandfon, J. Flynn, Green, (Chairman): Kinsella, O’Brien, Powers, Schiff, Wall
Assistant Professors: Beales, Holmes, Koonz, McBride, Lapomarda
Instructors: Anderson, McBride, Madzongwe, Turner
Visiting Lecturer: O’Boyle

Historical knowledge provides the means of understanding another age of society or a culture other than one’s own, of entering fully into the life of the past, of knowing its presuppositions, outlook and spirit, and of learning how to interpret it. History establishes perspective as a defense against excessive “presentism,” frees us from preconceptions, and enables us to place ourselves, in the atomic and space era, in relation to other individuals, societies and ages. Basically humanistic, with all civilization for its province, by its very character history is the bridge between the humanities and the sciences. To major in history, students must have a minimum of eight one-semester courses in history, exclusive of freshman courses. In addition, they must see to it that among these courses are at least two one-semester courses in American History and at least two in European History. A maximum of fourteen semester courses may be taken in history, including freshman courses. All freshmen who choose to take a course in history enroll in a special course, History 1, 2, History 3, 4, or History 13, 14. Only Freshmen who have qualified for Advanced Placement may take history courses other than these. Seminars may be taken only by history majors who have completed at least four semester courses in history, exclusive of the freshman courses. Students are afforded opportunities to participate in seminars and research projects by arrangement with the department.

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authors to be read are: Marx and Engels, Turgenev, Dickens, Zola, Mazzini, Nietzsche, Bronte, Sorel, Mill and Galsworthy. *Three credit hours.*

**HISTORY 60 — Intellectual History of 20th Century Europe.** — In this course some modern intellectuals' views of human nature will be discussed. Psychologists reduced it to drives and instincts; theologians elevated it as a creation of God; fascists submerged it in collectivism; and communists sought to re-form it. Some authors to be read are: Freud, Lenin, du Gard, Mann, Gramsci, Celine, Woolf, Buber, Hesse, and Camus. *Three credit hours.*

**HISTORY 61, 62 — History of Western Political Thought.** — This course is offered by the Department of Political Science as Political Science 141-142. *Six credit hours.*

**HISTORY 63 — Modern East Central Europe.** — This course traces the development of Poland, Czechoslovakia, Austria, Hungary, and the Balkan states. Approximately equal stress is given to each of the following: the historical foundations to 1815; the nineteenth century through World War I, the inter-war period, World War II and the Soviet satellite empire. *Three credit hours.*

**HISTORY 64 — Central and Eastern Europe in the Nineteenth Century.** — This course examines the experience of the absolutist-bureaucratic empires of Europe, Imperial Germany, Imperial Russia, and the Hapsburg Empire, from the mid-nineteenth century to their collapse in World War I. Attention is given also to the organization by 1920 of the states which emerged from the collapse of the imperial structures. *Three credit hours.*

**HISTORY 65 — Topics in History of East Central Europe I.** — Study of problems of nationalism in East Central Europe, tracing their evolution through four eras: the Communist Bloc since World War II, the independent states between the wars, the drive to independence 1815-1918, the supra-national empires 1526-1815. *Three credit hours.*

**HISTORY 66 — Topics in History of East Central Europe II.** — Study of the role of the Hapsburg Empire in the development of modern East Central Europe: the impact of the Enlightenment and French Revolution 1740-1792, the supra-national state in an age of nationalisms 1792-1867, the Dual Monarchy 1867-1918; the Hapsburg legacy: Austria, Hungary, Czechoslovakia 1918-1939. *Three credit hours.*

**HISTORY 71, 72 — Pre-Columbian America.** — A survey of all the civilizations flourishing in this hemisphere in the centuries before Columbus. Special attention will be given to the Olmecs, Mayans, Inca, Aztecs, American Indian (Pueblo and Hopewell cultures), and the Viking settlements. Field trips will be scheduled. *Six credit hours.*

**HISTORY 77, 78 — History of Latin America.** — A study of the colonial and national histories of Latin American Republics. An examination of the role of Latin America in the Modern World will be included during the second semester. *Six credit hours.*

**HISTORY 81, 82 — The Role of the Military in Latin America.** — An examination of the role of military and armaments' interests, particularly in political affairs and the shaping of economic policy. Most attention will be given to Argentina, Brazil, Chile, and Mexico. The study of a German military advisory program and German weapons sales will be utilized as a model. *Six credit hours.*
HISTORY 91, 92 — Problems in African History. — An historical analysis of selected African groups representative of the regional differences in sub-Saharan Africa. Discussions will include the process of African state formation, economic, social and religious functions within groups, the African response to the presence of Europeans, the dynamics of the slave trade, the growth of nationalism and independence movements. Six credit hours.

HISTORY 100 — The Exploration and Settlement of North America. — European exploration and colonization from the late fifteenth through the seventeenth century: the background of European expansion and imperial rivalries; myths and realities of the New World; relations with native Americans; the transit and adaptation of Old World culture and institutions to the New World, with particular emphasis on the English, French, and Dutch settlements. Three credit hours.

HISTORY 101 — Provincial America, 1689-1763. — The North American colonies from the Glorious Revolution to the Peace of Paris: Anglo-French imperial rivalry; the French and Indian wars; imperial administration and “salutary neglect”; the “new” immigration; urban America and the spirit of improvement; the Great Awakening; the Enlightenment in America; social mobility and class structure; the development of an American identity. Three credit hours.

HISTORY 102 — The Age of the American Revolution, 1763-1801. — Revolution and independence in the context of English and Anglo-American ideas and institutions: the collapse of imperial ties; revolutionary ideology and violence; the Revolution as a social movement; the state constitutions, Articles of Confederation, and Federal Constitution; the development of political parties in the 1790’s; the triumph of the Jeffersonian Republicans. Three credit hours.

HISTORY 103 — The Young Republic: The United States, 1801-1850. — Events, issues, and personalities from the inauguration of Thomas Jefferson to the Compromise of 1850: Jeffersonian democracy; the War of 1812; the “era of good feelings”; economic and cultural nationalism, John Marshall and the Supreme Court; westward expansion, sectionalism, and slavery; the second political party system and Jacksonian democracy; Manifest Destiny and the Mexican War. Three credit hours.

HISTORY 104 — History of the Civil War and Reconstruction. — An examination of the background and causes of the U.S. Civil War, the course of the War itself and the reconstruction following it. The post Civil War Black experience around which so much of the reconstruction centered will be followed into the Twentieth Century. Three credit hours.

HISTORY 105, 106 — The United States in the Twentieth Century. — A study of the salient political, social, economic and cultural developments in the history of the United States from the end of the nineteenth century to the recent past. Each semester selected problems of particular importance will be given special consideration. Six credit hours.

HISTORY 107 — 19th Century United States Diplomacy. — A study of the foundations and development of American diplomacy from the beginning to the Spanish War. Three credit hours.

HISTORY 108 — 20th Century United States Diplomacy. — A study of the foreign policies and relations of the United States with respect to the nations of the Americas, Europe, Asia, the Middle East, and Africa with an emphasis on the American presidents and their secretaries of state from the Spanish War to the
present. Three credit hours.

HISTORY 109, 110 — Problems in American Political History. — A two-semester course which will consider three problems in American political history each semester. Problems will be drawn from both the nineteenth and twentieth centuries. In addition to problems of party politics, consideration will be given to non-party politics, interest groups, the political process, and intra-government politics. The course will include lectures, discussions and papers. Six credit hours.

HISTORY 111, 112 — American Social and Intellectual History. — An interdisciplinary examination of the political, economic, religious, social, and cultural development of the American mind from the discovery of America to the present. Six credit hours.

HISTORY 115 — The Idea of American History. — In this course writings of the major American historians, together with other literary sources, are examined in terms of the sources and development of their thought and the use which the American community made of their ideas. Historiography thus takes the form of intellectual history, and the objective is the development of a particular perspective on American society and culture. Three credit hours.

HISTORY 116 — Religion and Society in America. — An examination of the role of religion in American history with particular attention to the relationship between religion and social reform. Three credit hours.

HISTORY 118 — The Reform Impulse in America. — An examination of reform in the entire American experience with particular emphasis on such topics as: the “humanitarian” reforms of the first half of the 19th Century (anti-slavery, women’s rights, peace, prisons, communes, etc.), the Jacksonian political reforms, the social and political strivings of the Populists, Progressives, and New Dealers and the reform efforts of “Youth” and Blacks in the 1960’s. Three credit hours.

HISTORY 120 — Black American Experience. — An analysis of the system of slavery and an examination of the characteristics, achievements, and problems of the Black man in America, in a context that is relevant to his contemporary life-style. Three credit hours.

HISTORY 121 — American Business and Industrial History. — The Business and Industrial History of America from colonial times to the present with particular emphasis on the years between the Industrial Revolution of the first half of the 19th Century and the “modern world of enterprise.” The nation’s business and industrial development will be presented within the framework of its overall social, political, economic, intellectual, and cultural history. Three credit hours.

HISTORY 122 — American Urban History. — An inter-disciplinary examination of the founding and development of American cities from colonial times to the present. Cities will be studied within the context of American social, political, economic, industrial, and cultural history. Three credit hours.

HISTORY 123 — America in the 1930’s. — This course is designed to acquaint students with American life in the decade of the great depression. It will attempt to deal with the period as a whole, examining its political, social, religious, and cultural life through lectures, discussions, extensive primary and secondary readings, films, music, and guest speakers. Three credit hours.

HISTORY 131, 132 — England to Elizabeth I. — A detailed survey of the
political, social, cultural, and intellectual history of Britain from the prehistoric Beaker people through the Romans, Saxons, and Normans to the age of Elizabeth I. *Six credit hours.*

**HISTORY 133, 134 — Constitutional and Legal History of England.** — Origin and development of the parliamentary system and the common law. *Six credit hours.*

**HISTORY 135 — Tudor England, 1485-1603.** — This course emphasizes religious, political and economic factors from the beginning of the reign of Henry VII to the end of the reign of Elizabeth I. *Three credit hours.*

**HISTORY 136 — Stuart England, 1603-1714.** — This course emphasizes religious, political and intellectual factors from the beginnings of the reign of James I to the end of the reign of Anne. *Three credit hours.*

**HISTORY 137 — Hanoverian England, 1714-1815.** — A study of the religious, political, economic, and intellectual factors in English history from the accession of George I to the Congress of Vienna. *Three credit hours.*

**HISTORY 138 — England since Elizabeth I.** — This course is a survey of the religious, political, economic, and cultural factors in English history from Elizabeth I to the outbreak of World War II. A brief analysis of the period since 1939 is also given. *Three credit hours.*

**HISTORY 139, 140 — England and the British Empire, 1815 to the Present.** — This course emphasizes the social changes stimulated by rapid industrialization, the democratization of British politics, the decline of the West Indian empire, and the rise of new holdings in Africa and Australasia. British involvement in European affairs, the Crimean, Boer, and World Wars will receive stress, as will the transition from empire to commonwealth in the twentieth century. *Six credit hours.*

**HISTORY 141 — History of Greece.** — This course is offered by the Department of Classics as Classics 157. *Three credit hours.*

**HISTORY 143 — History of the Roman Republic.** — This course is offered by the Department of Classics as Classics 158. *Three credit hours.*

**HISTORY 144 — History of the Roman Empire.** — This course is offered by the Department of Classics as Classics 164. *Three credit hours.*

**HISTORY 147, 148 — History of Spain.** — A study of the historical evolution of the peoples of the Iberian Peninsula from their Roman origins to the emergence of modern Spain in the twentieth century. Emphasis will be placed on political, social, and economic developments, with the reigns of Ferdinand and Isabella dividing the two semesters. *Six credit hours.*

**HISTORY 151 — History of Russia to 1917.** — A survey of the economic, social, religious, political and cultural history of the Russian people from the period of ancient Kiev to the revolutions of 1917. *Three credit hours.*

**HISTORY 152 — History of the Soviet Union.** — A study of the development of Russia from the Bolshevik revolution of 1917 to the present day. *Three credit hours.*

**HISTORY 153 — Imperial Russia 1700-1825.** — This course examines the development of Russia under the tsarist autocracy, from Peter the Great to the December Revolt. Emphasis is given to “westernization”-modernization in economic, political, and social organization-and to competing ideologies, conservative as well as radical. Foreign affairs are given less attention than domestic, especially institutional
and intellectual, affairs. Three credit hours.

HISTORY 154 — Imperial Russia 1825-1917. — This course examines the experience of tsarist Russia, from Nicholas I to the collapse of the autocracy in 1917. Emphasis is given to “westernization”—modernization in economic, political, and social organization—and to competing ideologies, conservative as well as radical. Foreign affairs are given less attention than domestic, especially institutional and intellectual, affairs. Three credit hours.

HISTORY 155 — Topics in Modern Russian History I. — Study of major factors in the development of Imperial Russia: Peter the Great and revolutionary change, Catherine the Great and enlightened absolutism, Alexander I and “constitution”, the rise of ideology: Official Nationalism and its critics. Three credit hours.

HISTORY 156 — Topics in Modern Russian History II. — Study of major turning points in the transformation of Imperial Russia into the Soviet Union: Alexander II and the era of “Great Reforms”, the Revolution of 1905, the Revolutions of 1917, the Stalin revolution. Three credit hours.

HISTORY 157 — Racial Crisis in Southern Africa. — A study of the origins and development of the racial crisis in the southern part of the African continent. Individual reports are emphasized. Three credit hours.

HISTORY 158 — African Emigrants. — The course seeks to examine the return of former slaves to their homelands. Emphasis will be on the re-integration of these emigrant groups into 19th century West African society. Discussions will include the return of Afro-Americans to Liberia, Sierra Leonians to Nigeria, West Indians to Nigeria and Ghana and Afro-Brazilians to Dahomey, Togo, and Nigeria. Three credit hours.

HISTORY 171 — History of Germany: The Reformation to the Revolution of 1848. — This course will survey German history with emphasis on Luther, the Thirty Years' War, the Rise of Prussia, “Enlightened Despotism,” the literature of the “Storm and Stress,” period, the impact of the French Revolution and Napoleon, the growth of German nationalism, and the failure of liberal ideals in 1848. Three credit hours.

HISTORY 172 — Germany: Bismarck to Brandt and Ulbricht. — Conservative change under Bismarck, the development of Social Democracy under Bebel, Wilhelm II and the First World War, German opposition to the war, The November Revolution of 1918, democracy by default: the Weimar Republic, the rise of Hitler and the collapse of liberal democracy, the Nazi State, and an exercise in comparative history: East and West Germany since 1945. Three credit hours.

HISTORY 177 — Fifth French Republic. — This course is offered by the Department of Political Science as Political Science 153. Three credit hours.

HISTORY 179 — History of Argentina. — An examination of the La Plata region’s colonial heritage and various epochs in Argentine history, especially those of the past century. Principal emphasis will be placed upon Argentina’s political and economic evolution, upon the role of her military sector, as well as upon her relationship with neighboring nations, Europe, and the United States. Three credit hours.

HISTORY 180 — History of Mexico. — An examination of Mexico’s colonial heritage, modern reform movements and revolutionary developments. Emphasis will be placed upon political and economic history as well as upon Mexico’s international relations. Three credit hours.

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HISTORY 183, 184 — European Imperialism, 1415-1960. — This course examines the impact of European empires upon alien societies. Stress is given to imperial competition in Asia, the slave systems of America, and the establishment of settlement colonies in South Africa, Australia, and Canada. The new imperialism of the nineteenth and twentieth centuries and decolonization after World War II will be treated. *Six credit hours.*

HISTORY 191, 192 — The Papacy in the Modern and Contemporary World. — This course assesses the interrelationship of the papacy on the one hand and religious and secular movements on the other from the Renaissance through Vatican II. The first semester ends with Napoleon. *Six credit hours.*

HISTORY 193, 194 — Capitalism and the American Business Ethos. This course emphasizes the "economic mind" of American society and its relation to American politics and foreign policy since the foundation of the Republic. Thematic treatment will be topical rather than chronological, and a working knowledge of a survey of American history is assumed. *Six credit hours.*

HISTORY 197 — Catholicism in a Revolutionary Age. — Since the eighteenth century the Catholic Church has confronted a number of significant revolutionary changes. In response Catholic thinkers attempted to locate their historical experience in the context of Christian belief and Catholic tradition. An effort will be made to understand these responses through examination of the major social and political ideas held by Catholics in Europe and America. *Three credit hours.*

HISTORY 201 — Seminar in American History. — This course may be taken either semester, but not both, in any academic year. *Three credit hours.*

HISTORY 202. — Seminar in Latin American History — This course may be taken either semester, but not both, in any academic year. *Three credit hours.*

HISTORY 203. — Seminar in Pre-Modern History. — This course may be taken either semester, but not both, in any academic year. *Three credit hours.*

HISTORY 205. — Seminar in Modern History. — This course may be taken either semester, but not both, in any academic year. *Three credit hours.*

HISTORY 207. — Reading Course in History. — Reading of a selected list of documentary and authoritative works under direction with individual reports and discussion. Students enrolled in this course must receive approval of the Department. *Three credit hours.*

HISTORY 208. — Reading Course in History. — Reading of a selected list of documentary and authoritative works under direction with individual reports and discussion. Students enrolled in this course must receive approval of the Department. (This is not a continuation of 207.) *Three credit hours.*
The program in mathematics is based upon the awareness of the increasing contribution of mathematics to contemporary culture as well as its key role in scientific and humanistic education. Because mathematics has undergone basic changes in content as well as in point of view, there is strong emphasis in all courses on a synthesis of old and new concepts. Seminars, individual discussion and research projects are an integral part of the department program. Mathematics majors have the use of a Common Room for informal discussion with staff members and fellow students. The O'Callahan Science Library has a fine selection of classical and contemporary mathematics books, monographs and journals available to all students in the College. The College has an I.B.M. system/360, Model 32K, computer with time available for instruction and research in computer science. A mathematics major is required to complete ten semester courses in mathematics.

MATHEMATICS 21, 22 — Introductory Calculus and Probability I, II — Topics covered are the algebra of sets, operations with functions, coordinate geometry, limits and continuity of real functions, integration and differentiation of the algebraic, exponential, logarithmic and trigonometric functions. Then the concepts of probability measure, independent trials process, mean and variance of random variables, Chebyshev's inequality and the law of large numbers are considered. Topics are selected from Markov chains and continuous probability. Six credit hours.

MATHEMATICS 31, 32 — Principles of Analysis I, II — This course in the calculus of real functions is intended for students who are planning to take further work in mathematics. It begins with a brief study of the algebra of sets, the algebra of functions, and the basic properties of the real number system. It goes on to consider the integral and differential calculus of the algebraic, logarithmic, exponential and trigonometric functions with applications to maxima and minima problems and some elementary differential equations. The second term includes the mean value theorem and Taylor's series with application to scientific problems. Six credit hours.

MATHEMATICS 33, 34. — Freshman Honors Section in Mathematics. — The mathematical material varies from year to year but usually the topics are selected from analysis and abstract algebra. Topics studied in the 1969-70 course were the general areas of calculus and algebra, correlating the two by examining the
algebraic structure of function algebras which are defined by concepts from the
calculus. Specific topics include the concept of area, integration and differentiation,
infinite series and sequences, the real numbers as a complete ordered field, rings,
groups, ideals and factorization. Six credit hours.

MATHEMATICS 35, 36. — Higher Algebra I, II. — The purpose of this course is to
provide the algebraic background for Freshmen planning overlapping careers in
mathematics and science. Some knowledge of elementary calculus and physics along
with proven ability in mathematics are prerequisites. Topics covered are the geometry
of vector spaces, inner product spaces, determinants and matrices, symmetry transfor-
mations and groups with applications to chemistry and physics, the orthogonal and
unitary groups, Lorentz transformations and elementary eigenvalue problems. (This
course may not be substituted for any analysis course such as Math. 31, 32. It is an
elective course open only to Freshmen). Six credit hours.

MATHEMATICS 41, 42 — Principles of Analysis III, IV — This course is a study
of the calculus of several variables. The first term covers double and triple integrals
with applications, transformation of integrals and the Jacobian, transformation of
coordinates, the derivative and gradient of a scalar field, the chain rule for partial
derivatives, and problems involving maxima and minima. Topics covered in the sec-
ond term include an introduction to line integrals, Green's theorem, curl and
divergence of vector fields, surface area, special first and second order differential
equations, linear differential equations including power series solution, and topics in
numerical analysis. Six credit hours.

MATHEMATICS 43. — Linear Algebra. — This course provides an introduction to
the study of vector spaces over the real and complex number fields. Topics covered in-
clude linear subspaces, quotient spaces, linear transformations, matrices and deter-
minants. Equivalence of matrices is then considered, leading to the row echelon form
and its various applications. Three credit hours.

MATHEMATICS 51. — Introduction to Computing. — This course provides an
introduction to digital computing through a combination of lecture and actual com-
puter use in the laboratory. Emphasis is placed upon problem solving technique rather
than technical competence. FORTRAN is covered in depth, and a brief introduction
is given to BASIC and 360/370 BAL. Three credit hours.

MATHEMATICS 52. — Intermediate Computing. — For students with more than
ordinary competence in Math. 51, this course continues the student's education in
computing by imparting an extensive knowledge of PL/1 coupled with significant
projects in the laboratory. Disk and Tape usage is taught along with the techniques of
systems analysis. Depending upon class interests topics such as simulation, data struc-
tures & management, and characteristics of various computer and operating systems
have been discussed. Three credit hours.

MATHEMATICS 102 — Differential Geometry — This is a first course in the
differential geometry of curves and surfaces for students who have completed a year
course in calculus and a semester course in linear algebra. Topics covered include the
Frenet-Serret formulas, smooth surfaces in R³, fundamental forms, differentiable
manifolds, vector fields, connections and a brief introduction to Riemannian
geometry. Three credit hours.

MATHEMATICS 104 — Ordinary Differential Equations — The first part of the
course deals with linear differential equations; basic existence theorems are proved,
equations with constant coefficients are treated in detail, and series methods are in-

vestigated in detail. Non-linear systems will be discussed, the topics treated being ex-
istence and uniquesness theorems, series methods, stability theory, including a brief in-
troduction to Lyapunov's direct method. Three credit hours.

MATHEMATICS 106 — Theory of Probability — This course in the algebra and
calculus of probability includes the following topics: basic notions of probability
defined on discrete sample spaces, combinatorial analysis, conditional probability, the
binomial, Poission and normal distributions and the DeMoivre-Laplace limit
theorem; random variables and their numerical characteristics, generating functions,
recurrent events, random walks and Markov chains, limit theorems and the laws of
large numbers. Three credit hours.

MATHEMATICS 141, 142 — Calculus on Manifolds — This course deals with
calculus on manifolds and assumes that the student has a strong background in linear
algebra. The following topics are taken up: the calculus of vector-valued functions, the
Frenet equations, steady flows, real-valued functions of several variables, line
integrals, the differential, the implicit function theorem, tensor products and exterior
algebra, differential forms, integrals of forms over singular chains, the de Rham
theorem. Six credit hours.

MATHEMATICS 143, 144 — Complex Analysis — The course provides an
introduction to the motivation, concept and use of complex analytic functions. Topics
include the Cauchy-Riemann equations, the Riemann sphere, analytic continuation,
the Cauchy integral theorems, Taylor's series, Laurent's series, the calculus of
Residues, the Argument Principle, conformal mapping, the Riemann mapping
theorem, and some applications to the theory of flows. Six credit hours.

MATHEMATICS 151, 152 — Abstract Algebra — The purpose of this course is to
provide a systematic development of algebraic systems and to study those topics
which are most useful in the application of algebra to other parts of mathematics and
to other sciences. Topics covered include quotient groups, exact sequences, the
isomorphism theorems, vector spaces and linear transformations, field exten-
sions with some Galois theory, modules, tensor products, and topics in Noetherian
rings. Six credit hours.

MATHEMATICS 153 — Applied Algebra — The purpose of this course is to give
an introduction to certain topics in mathematics of an applied nature. There is no
single unifyng theme but much of the course will require a familiarity with linear
algebra. Among the topics to be discussed are linear programming, game
theory, integer and dynamic programming, coding theory, graph theory, flow
networks. Prerequisite: Mathematics 43. Three credit hours.

MATHEMATICS 161, 162 — Real and Abstract Analysis — Topological ideas
are introduced through a treatment of metric space topology. After the
study of open, closed, compact and connected spaces with emphasis on their behavior
under continuous mappings, selected topics from functional analysis are considered.
These include lim sup and lim inf, relation of uniform convergence to differentiation
and integration, and the Stone-Weierstrass approximation theorem. The second
semester topics include an introduction to measure theory and Lebesgue-Stieltjes in-
tegration, Hilbert space and other material from linear space theory. Six credit hours.

MATHEMATICS 163, 164 — Algebraic Topology — The first semester is devoted
to a study of the fundamental group, with emphasis on applications. Topics covered
include Van Kampen's Theorem, computation of the fundamental group of a com-
plex, classification of closed surfaces, three-dimensional manifolds, and covering
spaces. In the second semester, singular homology and cohomology are introduced, and the Mayer-Vietoris and Kunneth Theorems are proved. Applications include fixed-point theorems, the Jordan-Brouwer Theorem and duality on manifolds. Homotopy groups and fiber bundles are considered briefly. Six credit hours.

MATHEMATICS 171, 172 — Methods of Numerical Analysis — The principal methods to be studied are: approximation of functions, methods of linear topological spaces and linear operators, iterative and topological methods, relaxation, interpolation and extrapolation and graphical methods. Applications to computation of series, systems of linear equations, ordinary and partial differential equations, and eigenvalue problems will be included with practical experience in the computer laboratory. Six credit hours.

MATHEMATICS 173, 174 — Principles and Techniques of Applied Mathematics — The primary aim of this course is the understanding of a wide spectrum of scientific phenomena through the use of mathematical ideas, abstractions, methods and techniques. One of the principal aims will be to formulate idealized but relevant techniques. Topics included will be: ordinary differential equations: the heat equation, eigenvalue problems; partial differential equations: Poisson's theorem and examples; calculus of variations: Fourier analysis: the inversion problem of Fourier series. Six credit hours.

MATHEMATICS 181 — Mathematical Logic — Several systems of pure logic and applied logic will be discussed within a general framework which consists of three basic aspects of symbolic languages: grammatic construction, interpretations and deductive systems. The major results relative to completeness, incompleteness and decidability will be considered within this framework. Three credit hours.

MATHEMATICS 201, 202 — Honors Seminar — The chief aim of the mathematics seminar is to provide an opportunity for individual and group investigation of topics not covered in course work by the mathematics majors. The method employed is active participation on the part of the students. The subject matter varies to suit individual students and is often related to the research activity of the professor. In 1969-70 there were individuals and small groups carrying on such independent study in the areas of algebraic geometry, Lie groups, functional analysis, complex analysis, probability theory, commutative algebra, applied mathematics and the classical groups. Six credit hours.
Modern Languages
And Literatures

Professors: Desautels, S.E. Flynn, McNerney
Associate Professors: Baker, Fraser (Chairman), Lamoureux, McKenna, Zwiebel
Assistant Professors: Bernstein, Gaulupeau, Klein, Laires, Soos
Instructors: Long, Severens

The courses offered by the Department of Modern Languages and Literatures are intended to contribute to the student's intellectual and aesthetic development through the study of foreign languages, literatures, and cultures. Major programs requiring ten semester courses beyond the intermediate level, are offered in French, German, Russian, and Spanish. The specific curriculum of each student will be arranged in consultation with a departmental advisor. Students are urged to enrich their program by taking additional courses in another modern language, and in allied fields. The Junior Year Abroad under the auspices of approved programs in Austria, France, Germany, Spain, etc., is open to qualified students. The language laboratory offers to the student facilities for drills and exercises, as well as for listening to literary and cultural material, all appropriately coordinated with classroom work in the various courses. Credit for the first semester in the following course will not be given unless the second semester is also completed: Modern Languages II

A Major in European Literature:
The Department of Modern Languages and Literatures offers a concentration in European Literature. Courses are conducted in English and employ translations. The program is designed to introduce students to the best and most representative works of the major cultures of the continent. Emphasis is also placed on developing a sufficient competence in at least one of the national languages to assure direct contact with the original texts.

Course Requirements:
Ten courses distributed as follows: Landmarks 101 and 102. Four from S.E.L. 121, 131, 141, 143, 145, 151, and 153. Four from S.E.L. 241, 242, 251, and 252; courses in literature taught in the original language (a maximum of two).

Language Requirement:
A minimum of two semesters beyond the intermediate level in either French, German, Russian, or Spanish.

FRENCH
FRENCH 11, 12 — Elementary French — A course designed for students with no
previous study of French. The aim of this course is the acquisition of a basic speaking reading, and writing knowledge of idiomatic French. Three hours weekly and at least one hour of laboratory practice. Six credit hours.

FRENCH 13, 14 — Review French — A course designed to accommodate students who have already studied French in high school, but who have placed below 450 in the CEEB French Achievement Test. In the first semester, a rapid review of elementary French with an emphasis on speaking, reading, and writing. In the second semester, reading and discussion of texts. Three hours weekly; Laboratory Practice. Six credit hours.

FRENCH 21, 22 — Intermediate French — A review of the fundamentals of the language supplemented by reading of literature and cultural material and by practice in oral expression. Three hours weekly; laboratory practice. Six credit hours.

FRENCH 127, 128 — Aspects of French Culture — A series of one-semester courses devoted to special literary, political and cultural topics relating to France. Conducted in French with the pre-requisite of French 21, 22, or its equivalent. Six credit hours. (Conducted in French).

FRENCH 131, 132 — French Composition and Conversation — Pre-requisite: French 21, 22 or its equivalent. This course is designed for the non-French major who wishes to gain proficiency in written and oral French. Emphasis is placed on developing correctness and fluency in everyday situations. Regular methods of instruction include dictation, phonetic transcriptions, discussions, debates, compositions, and lab exercises. Six credit hours. (Conducted in French).

FRENCH 133, 134 — Advanced French — Pre-requisite: French 21, 22 or its equivalent and permission of the instructor. A course designed primarily for majors in French, and intended to enable the student to achieve correctness, fluency, and effectiveness in French. Advanced syntax. Introductory work in etymology, stylistics, comparative lexicology and use of the International Phonetic Alphabet. Six credit hours. (Conducted in French).

FRENCH 135, 136 — Advanced French Oral and Written Stylistics — A course designed primarily for majors in French and intended to continue the work of French 133, 134 on a higher level. In this course there will be applied recent work in the field of Stylistics. Six credit hours. (Conducted in French).

FRENCH 141 — French Literature of the Middle Ages — An introduction to epic, lyric, allegorical, and dramatic literature from the medieval period in France. Some of the selected works are read in old French. The major emphasis of the course is on the perspective of the medieval world-view as regards man and society. Three credit hours. (Conducted in French). (Not offered in 1973-74).

FRENCH 142 — The Sixteenth Century — A study of the most important prose writers and poets of the French Renaissance and early Baroque period. Attention is also given to cultural manifestations in art, music, and architecture. Among authors studied are Marguerite de Navarre, Rabelais, Marot, Calvin, Dubellay, Ronsard, Montaigne, Sceve, and Agrippa d'Aubigne. Three credit hours. (Conducted in
FRENCH 151 — Prose and Poetry of the Seventeenth Century — The major movements and authors are studied against the historical background of the period: Malherbe, Racan, De Viau, St. Amant, D'Urfe, Scarron, Furetiere, Mme de La Fayette, Descartes, Pascal, La Rochefoucauld, La Bruyere, La Fontaine, Boileau. Three credit hours. (Offered in 1974-75).

FRENCH 152 — Dramatic Literature of the Seventeenth Century. — The principal works of Corneille, Moliere, and Racine are studied against the historical background of the period. Three credit hours. (Offered in 1974-75).

FRENCH 163 — Eighteenth Century: The Philosophes — A study of the Enlightenment movement in France with primary emphasis on the philosophical and political content in the works of the major authors of the period: Montesquieu, Diderot, Voltaire, Rousseau, etc. Three credit hours. (Conducted in French). (Not offered 1973-74).

FRENCH 164 — Eighteenth Century Literature — The course is designed to study major eighteenth-century literary forms: the novel, conte philosophique, epistolary experiments, and the theater. Authors studied include Montesquieu, Voltaire, Diderot, Marivaux, Beaumarchais, Laclos, Sade, and Chenier. Three credit hours. (Conducted in French). (Not offered 1973-74).

FRENCH 172 — The Nineteenth Century Novel — A brief examination of the evolution of the French novel up to 1800, followed by the critical reading of works selected from the romantic and realistic novel: Constant, Chateaubriand, Stendhal, Balzac, and Flaubert; and the naturalist novel: Zola and Huysmans. Three credit hours. (Conducted in French).

FRENCH 173 — Nineteenth Century Poetry — The course studies the major poets of the nineteenth century grouped according to affinities: the Romantics, Vigny, Hugo, and Musset; the Parnassian trend with Gautier, Leconte de Lisle, and Heredia; the Symbolist lineage of the “poetes damnes,” Baudelaire, Verlaine, Rimbaud, Mallarme; and the originals, Nerval and Lautreamont. Three credit hours. (Conducted in French). (Not offered 1974-75).

FRENCH 181 — The Theater in the Twentieth Century — A study of the many forms of the modern French theater which run the gamut from escapism to “engagement,” from traditional psychology to absurd consciousness, and from almost formless spontaneity to minutely controlled rituals. Authors studied are Claudel, Jarry, Giraudoux, Cocteau, Becket, Sartre, and Camus. Three Credit hours. (Conducted in French). (Not offered 1973-74).

FRENCH 182 — The Novel in the Twentieth Century — The course studies the transformations in the form and conception of the novel from Proust and Gide, to the present, and its many expressions of the crises in the consciousness of modern man. Three credit hours. (Conducted in French).

FRENCH 183 — Twentieth Century Poetry — The new sensibility revealed by
French poets from Valery and Apollinaire to Ponge and Bonnefoy is studied with special attention given to the many new forms and modes of expression developed in the genre. *Three credit hours.* (Conducted in French). (Not offered 1973-74).

**FRENCH 291, 292 — Junior Year Tutorial** — Eligible juniors concentrating in French may elect 291-292 for a full-year course. Those who wish to enroll must obtain permission from the Chairman of the Department of Modern Languages and Literatures. *Three credit hours.*

**FRENCH 293-294 — Senior Year Tutorial** — Eligible seniors concentrating in French may elect French 293-294 for a full-year course. Those who wish to enroll must obtain permission from the Chairman of the Department of Modern Languages and Literatures. *Six credit hours.*

**GERMAN**

**GERMAN 11. 12 — Elementary German** — The aim of this course is the acquisition of a basic speaking, reading and writing knowledge of German. Three hours weekly, laboratory practice. *Six credit hours.*

**GERMAN 19. 20 — Accelerated German** — A special course for highly motivated students seeking the acquisition of a firm basis in German within a minimal amount of time. Covers the range extending from Elementary German to the completion of Intermediate German in two semesters. Six hours weekly, with laboratory practice. Open to students with staff permission. *Twelve credit hours.*

**GERMAN 21. 22 — Intermediate German** — A review of the fundamentals of the German language, supplemented by readings in literary and cultural texts as well as practice in oral expression. Pre-requisite: German 11-12 or its equivalent. *Six credit hours.*

**GERMAN 131 — Studies in German Culture and Civilization (1750-1900)** — A course designed to introduce the student of German to outstanding examples of German thought, art and cultural development in a historical as well as contemporary context. Strongly recommended for prospective German majors and Freshmen seeking advanced placement. Readings, lectures in German. *Three credit hours.*

**GERMAN 132 — German Culture and Civilization in the Twentieth Century** — Designed to introduce the student of German to the historical and cultural development of Germany in the twentieth century with special emphasis on contemporary Germany. Strongly recommended for prospective German majors and Freshmen seeking advanced placement. Lectures, readings and discussions in German. *Three credit hours.* (Spring, 1974).

**GERMAN 133 — German Composition and Conversational Practice** — A course devoted to the achievement of basic fluency in oral and written German. Weekly papers and oral assignments required. Strongly recommended for prospective German majors and students seeking advanced placement. *Three credit hours.* (Fall, 1973).

**GERMAN 134 — German Composition and Conversational Practice** — Designed to improve facility in spoken and written German. Weekly papers and oral
assignments required. Strongly recommended for prospective German majors or students seeking advanced placement. *Three credit hours.*

**GERMAN 161 — German Literature in the Age of Goethe. Enlightenment to Early Classicism** — A study of the outstanding period in German Literature, embracing the periods of Enlightenment, Storm and Stress and Early Classicism. Readings in all genres from representative writers of the epoch, Lessing, Klopstock, Herder, Wieland, Goethe, Lenz and Schiller. In German. *Three credit hours.* (Fall, 1974).

**GERMAN 162 — German Literature in the Age of Goethe. Classicism and Romanticism** — A study of the latter part of Germany’s greatest literary epoch, embracing the aesthetic humanism of Weimar and the unbridled subjectivism of Romanticism. Analysis of representative works by Goethe, Schiller, Holderlin, Kleist, Novalis, Brentano, Hoffman, etc. In German. *Three credit hours.*

**GERMAN 171 — Nineteenth Century German Prose** — Fiction and prose works of the Nineteenth Century. Special emphasis on the novella as a genre and the development from Idealism towards Realism. Works of representative writers such as Eichendorff, Heine, Gotthelf, Stifter, Keller and Meyer will be discussed and analyzed. In German. *Three credit hours.* (Fall, 1973).

**GERMAN 172 — German Drama of the Nineteenth Century** — The evolution of the German stage in the post-Schillerian era, beginning with the works of Kleist. Other dramatists considered will be Grillparzer, Buchner, Hebbel, Wagner, Hauptmann, the early Schnitzler and the young Hofmannsthal. In German. *Three credit hours.* (Spring, 1974).

**GERMAN 181 — Twentieth Century German Prose** — A study of German prose, especially fiction, since the turn of the century. Significant writers such as Thomas Mann, Franz Kafka, Herman Hesse, Robert Musil, Hermann Broch form the nucleus of this course. Post war writers such as Grass, Boll and Frisch are also considered. In German. *Three credit hours.* (Fall, 1975).

**GERMAN 182 — Twentieth Century German Drama** — The manifold developments of the German stage from Naturalism and Expressionism through Brecht’s Theater of Alienation and post-war experiments are the focal point of this course. Representative dramatists such as Hauptmann, Kaiser, Hofmannsthal, Brecht, Durrenmatt, Frisch, Weiss and Handke are discussed. In German. *Three credit hours.* (Spring, 1976).

**German 241, 242 — Special Topics in German Literature** — Intensive study of a special aspect of German Literature such as dominant theme, genre or literary point of view. Topics announced in the preceeding semester. Given in German or English according to staff decision. *Three semester hours.*

**GERMAN 251, 252 — Major Authors of German Literature** — Intensive study of the chief works of a specific German author. Previous topics, Thomas Mann, Hermann Hesse. These authors will be considered again in the near future. Given in Ger-
man or English according to staff decision. *Three credit hours.* (Fall, 1973) *Bert Brecht and the Recent German Theater.* In English.

**GERMAN 291, 292 — Junior Year Tutorial** — Eligible Juniors concentrating in German may elect German 291-292 for a full year course. Those wishing to enroll must obtain the permission of the Chairman of the Department of Modern Languages and Literatures. Topics to be determined with German staff. *Six credit hours.*

**GERMAN 293, 294 — Senior Year Tutorial** — Eligible seniors concentrating in German may elect German 293-294 for a full year course. Those wishing to enroll must obtain the permission from the Chairman of the Department of Modern Languages and Literatures. Topics to be determined with German staff. *Six credit hours.*

**ITALIAN**

**ITALIAN 11, 12 — Elementary Italian** — An intensive introduction to the elements of the Italian language, with the emphasis on oral and aural proficiency. *Six credit hours.*

**ITALIAN 21, 22 — Intermediate Italian** — This course is for students who have successfully completed a basic course in the language. Literary emphasis is on the shorter works of Twentieth Century prose writers. *Six credit hours.*

**RUSSIAN**

**RUSSIAN 11, 12 — Elementary Russian** — The aim of this course is the acquisition of a basic speaking, reading, and writing knowledge of idiomatic Russian. Three hours weekly, laboratory practice. *Six credit hours.*

**RUSSIAN 21, 22 — Intermediate Russian** — A continuation of Russian 11, 12 with added emphasis on acquiring oral fluency in contemporary Russian. Three hours weekly, laboratory practice. *Six credit hours.*


**RUSSIAN 131, 132 — Russian Composition and Conversation** — A course devoted to achieving the dual skills of conversational and compositional fluency in contemporary Russian. Texts include Russian fiction, technical texts and newspapers. The course is conducted entirely in Russian. *Six credit hours.*

**RUSSIAN 141, 142 — Stylistics** — A discussion of grammatical and syntactic anomalies. Special attention devoted to the verb and to problems involving lexical differentiation within semantically related word groups. *Six credit hours.*

**RUSSIAN 171, 172 — Golden Age of Russian Literature** — Study of the prose of Russian 19th Century literature. Representative readings from the works of Pushkin, Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov and others. Special emphasis is on
the transitions between succeeding esthetic literary movements: neo-classicism, romanticism, and realism. Readings, lectures and papers are in English with special discussion sections for those proficient in Russian. Six credit hours.

RUSSIAN 181, 182 — Soviet Literature — The evolution of Russian Literature in the Soviet period. Representative authors include Gorki, Babel, Mayakovsky, Sholokhov, Olesha, Pasternak, and others. The course also includes conflicts in critical interpretations of literature, e.g., Marxism and Formalism. Readings, lectures and papers are in English. Six credit hours.

RUSSIAN 241, 242 — Special Topics — A special course offered periodically for the study of a literary genre, form, theme, or problem. Three credit hours.

RUSSIAN 251, 252 — A special course offered periodically for the study of one or several authors of importance drawn from specific periods. Three credit hours.

RUSSIAN 291, 292 — Junior Year Tutorial — Eligible juniors concentrating in Russian may elect Russian 291, 292 for a full year course. Those who wish to enroll must obtain permission from the Chairman of the Department of Modern Languages and Literatures. Six credit hours.

RUSSIAN 293, 294 — Senior Year Tutorial — Eligible seniors concentrating in Russian may elect Russian 293, 294 for a full year course. Those who wish to enroll must obtain permission from the Chairman of the Department of Modern Languages and Literatures. Six credit hours.

SPANISH

SPANISH 11, 12 — Elementary Spanish — An intensive introduction to all elements of the Spanish language. Also included is a brief introduction to the culture of the Hispanic World. Six credit hours.

SPANISH 21, 22 — Intermediate Spanish — An intensive grammar review followed by oral practice, and readings in literature and culture. For students who have completed Spanish 12 or its equivalent. Six credit hours.

SPANISH 127, 128 Aspects of Hispanic Culture — A course devoted to the study of examples of Hispanic culture and thought in selected areas. Six credit hours.

SPANISH 131, 132 — Spanish Composition and Expression — Experience in the development of fluency in the oral and written aspects of the language. Six credit hours.

SPANISH 133, 134 — Survey of Spanish Literature — The literature of Spain across the centuries and its relative position in world literature. Six credit hours.

SPANISH 135, 136 — Spanish American Literature — Panoramic view of the literature of the various countries of Spanish America from the colonial days down to the present. Six credit hours.

SPANISH 153, 154 — Cervantes and the Theater of the Golden Age — Intensive study of the novels of Cervantes and works of the outstanding dramatists of this period. Six credit hours.

SPANISH 171, 172 — Nineteenth-Century Spanish Literature — A comprehensive view of all genres found in Spanish literature in the nineteenth century. Major focus is centered on the romantic drama, the development of realism in the novel and the drama, the novels of Galdos and Valera, and the major poets.
throughout the century. *Six credit hours.*

**SPANISH 181, 182 — Twentieth-Century Spanish Literature —** A comprehensive view of all genres found in Spanish literature in the twentieth century. Initial attention is given to the philosophy of the Generation of 1898 followed by consideration of the development of modern drama in Benavente, Lorca, and Buero, the novel in Baroja and Cela, the essay, and modern and contemporary poetry. *Six credit hours.*

**SPANISH 183 — The Modern Novel —** A study of the important novelists of Spain in the twentieth century and their contribution to the artistic, philosophical, and social interpretation of the period. Readings by Cela, Laforet, Sanchez-Ferlosio, Matute, Delibes, and Goytisolo. *Three credit hours.*

**SPANISH 231, 232 — Seminar in Hispanic Literature —** A course dealing with some specialized area, movement, or writer in Hispanic literature. The topic is changed each semester according to the needs and wishes of the Spanish faculty and students. *Six credit hours.*

**SPANISH 241, 242 — Special Topics —** A special course offered periodically for the study of a literary genre, form, theme, or problem. *Three credit hours.*

**SPANISH 251, 252 —** A special course offered periodically for the study of one or several authors of importance drawn from specific periods. *Three credit hours.*

**SPANISH 291, 292 — Junior Year Tutorial —** Eligible juniors concentrating in Spanish may elect 291, 292 for a full year course. Those who wish to enroll must obtain permission from the Chairman of the Department of Modern Languages and Literatures. *Six credit hours.*

**SPANISH 293, 294 — Senior Year Tutorial —** Eligible seniors concentrating in Spanish may elect Spanish 293, 294 for a full year course. Those who wish to enroll must obtain permission from the Chairman of the Department of Modern Languages and Literatures. *Six credit hours.*

**STUDIES IN EUROPEAN LITERATURE**

**S.E.L. 101, 102 —** A two semester introduction to the most significant literary works of Continental Europe from the Middle Ages to about 1815. Most of the selections are read in entirety, with critical readings also assigned. Semester I — The Medieval Epic, courtly literature, Dante, Boccaccio, De Rojas, Rabelais, and Montaigne. Semester II — Cervantes, Racine, Moliere, Pascal, Voltaire, Rousseau, Lessing, and Goethe. *Six credit hours.*

**S.E.L. 111 — The Renaissance —** Literary manifestations of the period in Italy and Northern Europe. Readings from the representative works of Petrarch, Boccaccio, Machiavelli, Ariosto, Castiglione, Erasmus, Rabelais and Montaigne. *Three credit hours.*

**S.E.L. 121 — Baroque and Classic Literature —** An interdisciplinary approach to continental literature between 1580 and 1680. Among authors read are: Cervantes, Calderon, Lope de Vega, Corneille, Moliere, Racine, Pascal and Grimmelshausen. *Three credit hours.*

**S.E.L. 131 — The Age of Enlightenment —** A study of the literature of eighteenth century Europe as it reflects the philosophical, cultural, and political aims of the Enlightenment. Among authors read are: Shaftesbury, Pope, Montesquieu, Voltaire,
Diderot, Rousseau and Lessing. *Three credit hours.*

S.E.L. 141 — European Romanticism — A study of the different forms and expressions of continental Romanticism. Readings of representative works by: E.T.A. Hoffmann, Kleist, Novalis, Schlegel, Tieck, Heine, Rousseau, Chateaubriand, Hugo, Nerval, Madame de Staël, Leopardi, and Manzoni. Special consideration is given to the relations between the Romantic Movements of the individual countries. *Three credit hours.*

S.E.L. 143 — The Rise of Realism in the Nineteenth-Century European Novel — The emergence and development of the realist novel as an art form reflecting the literary, cultural, and social attitudes of Continental Europe of the nineteenth century. Among authors read are: Balzac, Stendhal, Gogol, Turgenev, Flaubert, Dostoevsky, Zola, Galdós, and Tolstoy. *Three credit hours.*

S.E.L. 145 — Naturalism to Proust — The naturalist novel of Zola and the Médan Group and its influence on several American authors; the dislocation of the movement and the transition to the introspective novels of Gide and Proust. Among authors read are: Zola, Maupassant, the Goncourt Brothers, Huysmans, Crane, Norris, Dreiser, Gide and Proust. *Three credit hours.*

S.E.L. 151 — The Modern European Novel — A study of the modern novel with an emphasis on the most significant approaches to form and technique. Among authors read are: Gide, Mann, Musil, Kafka, Hesse, Malraux, Silone, Sartre, Camus, Grass, and Robbe-Grillet.


S.E.L. 241, 242 — Special Topics — A special course offered periodically for the study of a literary genre, form, theme, or problem. *Three credit hours.*

S.E.L. 251, 252 — A special course offered periodically for the study of one or several authors of importance drawn from specific periods. *Three credit hours.*
The Department of Naval Science, a recognized department of instruction within the College, educates and trains young men and women to serve as commissioned officers of the Navy and Marine Corps. Only those young men and women reasonably disposed to accept a commission in the Navy or Marine Corps should plan to enter the NROTC Program. This affirmation should be clearly understood by everyone who applies for the program.

Regular Scholarship Program

High school seniors who apply and are accepted for the Regular NROTC (scholarship) Program receive full tuition, all textbooks, military uniforms, and a $100 per month subsistence allowance while attending college. They are required to take certain college courses, undergo three summer training cruises of 4 to 6 weeks duration, and may be required to serve up to four years on active duty after commissioning.

College Contract Program

Entering freshmen and certain sophomore college students may apply directly to the Professor of Naval Science for enrollment in the College Contract (nonscholarship) Program. This program provides military uniforms and during the junior and senior years a subsistence allowance of $100 per month while attending college. Books that are available in the Unit bookroom are loaned to College Contract students. Contract students are required to undergo one summer training cruise of 4 to 6 weeks duration the summer preceding their senior year and may be required to serve up to three years on active duty after commissioning. All students who desire to be considered for this program should apply as early as possible. An application is not binding, and even after enrollment in the program, the student may withdraw without prejudice at any time prior to his junior year at his own request. As a College Contract Student, there are two avenues to becoming a Regular Scholarship Student. You may apply annually for the scholarship through the national competition and statewide selection process. If accepted, your scholarship would begin in September after selection. The second avenue open is through a Professor of Naval Science direct appointment. Annually the Professor of Naval Science is authorized to appoint a
number of outstanding students in the Contract Program for Regular status. Once accepted for this appointment, the $100 per month subsistence allowance begins immediately and the tuition is paid beginning with the semester in which you are appointed.

**Flight Indoctrination Program**

NROTC Students who are interested in aviation may apply for the Flight Indoctrination Program. During their junior and senior years they attend ground school and receive flight training at government expense at Worcester Municipal Airport during their free time. Most of these students receive a private pilot’s license while in College. Those students who desire to enter the aviation field after graduation are sent to Pensacola, Florida for additional flight training after commissioning.

**Naval Science Students**

Any student in the College may take the Naval Science courses. Naval Science students receive credit for satisfactory completion of the Naval Science courses but have no official status in the NROTC Program and receive none of the advantages of the Regular or Contract NROTC students. This training could prove to be beneficial should the graduated Naval Science student apply for a commission through sources normally available to college graduates other than the NROTC Programs.

**General Information**

The Holy Cross NROTC Unit is composed of approximately 100 Midshipmen and Contract NROTC Students. The Battalion is divided into companies and the overall leader of the battalion is the Midshipman Battalion Commander, a senior who has been chosen for his outstanding leadership qualities. The companies and platoons compete in various athletics. Students in the unit wear the naval uniform all day Monday. Familiarization with small arms and actual firing is provided at off-campus facilities. Student participation in any college extracurricular activities does not interfere with unit activities. Each year the midshipmen sponsor an active social program which includes a fall and spring picnic, a spaghetti dinner, the Military Ball, and bowling and pool tournaments. During semester breaks the Unit sponsors orientation trips to New London, Connecticut to visit conventional and nuclear submarines, to Pensacola, Florida, to visit aviation units, and to Camp Lejuene, North Carolina, to visit the Marine training. This is completely voluntary.

NAVAL SCIENCE 11 — Naval Orientation — A one hour per week introductory course designed to acquaint students with the Department of Defense and the U.S.
Navy, including mission areas and components of the Navy and Marine Corps, nautical terminology, custom and tradition. *No degree credit.*

NAVAL SCIENCE 12 — Naval Ships Systems I — A course designed to familiarize students with types, structure and purpose of naval ships. Ship compartmentation, propulsion systems, auxiliary power systems, interior communications, and ship control are included. Elements of ship design to achieve safe operations, and ship stability characteristics are examined. *Three Credit Hours.*


NAVAL SCIENCE 41 — Navigation — The derivation and utility of celestial navigation and application of spherical trigonometry to the astronomical triangle. Additional topics covered include piloting, electronic navigation and various navigational aids. Wave propagation theory is briefly covered. *Three Credit Hours.*

NAVAL SCIENCE 42 — Operations Analysis — An introduction to operations analysis methods, featuring a brief review of basic probability theory, gaming matrices, and distribution curves. Additional topics include application of quantitative inputs to decision-making, past usage of the OA method in the resolution of military and non-military problems, and admiralty law in its role as a constraint on naval operations. *Three Credit Hours.*

NAVAL SCIENCE 51 — Naval Organization And Management — Basic concepts and principles of organization, management, and leadership are examined within a framework of social and industrial organization and further developed through examination of local companies and the Naval Establishment including the unique characteristics generated by its objectives, technological complexity, operating environment, and function in society. *Three Credit Hours.*

NAVAL SCIENCE 101 — American Military Affairs — This course is a survey of military affairs from the colonial period to post-World War II. Emphasis is on the transition from limited to total war. *Three Credit Hours.*

NAVAL SCIENCE 102 — National Security Policy — This course deals with the formulation and implementation of American security policy. American military history is analyzed briefly to determine the factors bearing on the development of the defense structure of the United States. The methods of formulation of national security policy are studied, as is the role of each governmental component concerned with security affairs. *Three Credit Hours.*

**Marine Corps**

Candidates for commission in the Marine Corps will be required to complete NS 11, 12, 13 and 101; in place of NS 41, 42, 51, and 102, they will take courses in Marine Corps subjects as follows:

NAVAL SCIENCE 45 — Evolution of Warfare — A study of armed conflict from ancient to modern times. Focus is on the major figures, as well as patterns and major transitional periods. *Three Credit Hours.*

NAVAL SCIENCE 55 — Amphibious Doctrine — A history of landing operations with emphasis on the major seaborne campaigns of World War II. *Three Credit Hours.*
DEPARTMENT OF
Philosophy

Professors: Hampsch, Haran, Shea
Associate Professors: Cloeren, Dilanni (Chairman), Feehan, Harrington, Hein, Lynch, Pax
Assistant Professors: F. Callahan, Herx

The Department of Philosophy discharges a two-fold function, one to the entire College, the other to its majors. To both majors and non-majors it offers the opportunity to achieve a fuller and more reflective understanding of human experience in its intellectual, socio-political, aesthetic, religious and moral dimensions. To its majors, through a broad series of electives and through a personal advisory program, it extends the opportunity to obtain a more comprehensive view of the historical development and the contemporary movements within philosophy, as well as the opportunity to pursue the thought of an individual philosopher in depth. In general, the courses offered are open to the student body at large. However, the 100 and 200 level courses are available to freshmen only with the approval of the department chairman. The minimum requirement for the major is 10 semester courses in philosophy, at least eight of which must be chosen from the 100 or 200 sections. Upon deciding to become a philosophy major, a student must choose an advisor from the philosophy faculty in conjunction with whom he or she will set up a program of studies within the department. There are no extra-departmental requirements for philosophy majors. Besides a wide range of general and more specialized courses, the department offers a number of seminars, tutorials and opportunities for independent study. Student-faculty community is deepened through informal conversation in the relaxed and reflective atmosphere of a Common Room.

INTRODUCTORY COURSES

PHILOSOPHY II. — The Nature of Philosophical Inquiry. — A study of selected historical works in philosophy which represent distinctive philosophical styles. We will investigate the nature of philosophical problems, how they originate, how they are articulated, and alternative methods of solving or dissolving them. Attention will be given to the historical and contemporary significance of philosophical problems, their living context and their integration with intellectual and active life. Three credit hours.

PHILOSOPHY 31. — Philosophy of Man. — This course, sometimes called philosophical anthropology, should be of special interest to the student who has some knowledge of the bio-social sciences. The superiority of the intellect, freedom of choice and the ultimate nature of the human person are three pivotal problems for the undergraduate. Philosophical orientation is given for the study of such topics as emotion, motivation, habit, evaluation, cultural diversity and subjective factors in perception and communication. Three credit hours.
PHILOSOPHY 41 — Man in Society: His Freedom and Responsibility — An attempt to discover a way to think about human values, personal freedom and the quality of life in the face of advancing technology and socio-cultural change. The course will approach this question through a discussion of concrete problems in contemporary society and by a subsequent evaluation of various contemporary schools of social ethics. Three credit hours.

PHILOSOPHY 51. — God in Human Experience. — This course is an analytical examination of the nature and attributes of God. It investigates traditional concepts from classical sources such as Augustine and Aquinas. It will involve an evaluation and understanding of such topics as the cosmological and teleological arguments for the existence of God. It also considers the views of many modern philosophers such as Paul Tillich, John Robinson, Paul Edwards and other influential authors. Three credit hours.

PHILOSOPHY 61. — Introduction to Philosophy: Its Methods and Its Problems. — A study of selected philosophical texts, with the aim of introducing students to the nature of philosophical thinking and the variety of philosophical issues and areas, methods and theories. Three credit hours.

PHILOSOPHY 71. — Introduction to Philosophy. — This course will present the basic ideas of Aristotelean formal logic and introduce the student to such philosophical problems as the relation of concepts to mind and action, the nature of the soul, the existence of God and the nature and basis of value judgments. Three credit hours.

PHILOSOPHY 81. — Introduction to Philosophy (Honors Seminar-Freshmen) Three credit hours.

PHILOSOPHY 82. — Philosophy in An Age of Crisis. — An introductory philosophical analysis of the contemporary events that challenge human life and destiny. Special consideration is given to the problems of human dignity, truth, freedom, violence, social revolution, and the meaning of human existence. Three credit hours.

INTERMEDIATE COURSES

PHILOSOPHY 101. — Metaphysics. — This course is an experience-grounded analysis of the real in which its structure, first principles, and concrete realizations, with emphasis on the person and community, is discovered and studied. The investigation moves to a rational inquiry into the existence and character of the ultimate origin and purpose of real being. Three credit hours.

PHILOSOPHY 104. — Approaches to Ethics. — An examination of the attempts to arrive at the foundations of ethical values and the ultimate meaning of human experience. An emphasis is placed on the continuity in the development and refinement of these attempts historically, so that contemporary moral problems and their solution may be seen in proper perspective. Three credit hours.

PHILOSOPHY 107. — Foundational Questions in Ethics. — An explicitation of the distinctive character of moral experience, involving a phenomenological description of its various moments and dimensions and a study of typical interpretations of
this experience. Three credit hours.

PHILOSOPHY 109. — Theory of Knowledge. — A critical attempt to construct a sound theory of knowledge which avoids the extremes of Scepticism, Idealism and Relativism while accounting for the nature and foundation of knowledge and truth. There will be a wide variety of readings and discussions. Three credit hours.

PHILOSOPHY 115. — Introductory Logic. — An introduction into the field of logic with special emphasis on the Aristotelian syllogistic and propositional calculus, their inter-relationship, value and limitations. Its purpose is to familiarize the student with the deductive process and symbolic notation as well as to enable him to recognize and evaluate various kinds of argumentation and related fallacies. Three credit hours.

PHILOSOPHY 125. — Ancient Philosophy. — A study of main contributions of ancient Greek philosophy to the development of western thought. The student will be acquainted with the central problems raised by Pre-Socratic Greek Philosophy and will then examine the efforts of Socrates, Plato and Aristotle to meet these problems. The course will close with a consideration of important Post-Aristotelian contributions: Stoicism, Skepticism, etc. Three credit hours.

PHILOSOPHY 130. — Medieval Philosophy. — A study of medieval thought from Augustine to Ockham with special emphasis on Augustine, Eriugena, St. Bonaventure, St. Thomas, Duns Scotus, and Ockham. Also, an analysis of the philosophical movement in the thirteenth century. Three credit hours.

PHILOSOPHY 135. — Modern Philosophy I. — A study of the origins of modern philosophy: Descartes' turning towards the subject, his attempt at a justified method guided by the ideal of mathematical certainty, its influence on the development of European rationalism: Spinoza, Leibniz. Equal attention will be given to the competing empiricist philosophers and their approach to philosophy and science: Bacon, Hobbes, Locke, Berkeley, Hume. Three credit hours.

PHILOSOPHY 141. — Modern Philosophy II. — Kant tried to overcome rationalism and empiricism. His transcendental investigation led to a new evaluation of metaphysics, epistemology, the nature of the sciences and of morality. Despite Kant, speculation rose to unprecedented heights. The steps from Kant to Fichte and Hegel will be studied as well as the growing opposition (especially Marx, Kierkegaard) as foundations of Logical Positivism, Marxism, Existentialism. Three credit hours.

PHILOSOPHY 143. — American Philosophy. — A survey of the beginnings and development of American philosophic thought. Detailed discussions of the work of several leading men. The contemporary scene. Three credit hours.

PHILOSOPHY 144. — Contemporary European Philosophy. — The following main currents in European philosophy will be dealt with: 1. Logical positivism/analytical philosophy. 2. The phenomenological movement. 3. Existentialism. 4. Neo-Scholasticism. 5. Marxism. 6. Structuralism. Topics considered will include the attitudes of these philosophies toward the sciences and the technological world, their understanding of man's historicity, their contributions to the philosophico-political dimensions of life and their interactions with one another. Three credit hours.

PHILOSOPHY 145 — Phenomenology & Existentialism I — An examination of the origin and intent of the contemporary existential movement as it developed from the phenomenology of Edmund Husserl. Detailed study of the work of Heidegger and
Sartre. Influence of existentialism in the areas of psychology, sociology, art, political and religious thought. Three credit hours.

PHILOSOPHY 147. — Analytic Philosophy. — A study of the origins and aims of this contemporary movement, through an examination of the principal works of its founders and contributors, with stress on a critical appraisal of its presuppositions, value and limitations. Three credit hours.


PHILOSOPHY 156 — Freedom & Conscience — This course discusses the nature, function and dignity of freedom and conscience and explores the impact of existentialism, phenomenology and personalism on modern man's awareness of his uniqueness. Relevant documents of Vatican II, with special emphasis on conclusions drawn from natural reason, are studied. Finally, freedom of conscience, in its true meaning, is applied to contemporary problems. Three credit hours.

PHILOSOPHY 157. — Medical Ethics. — The course explores ethical issues in contemporary medical practice as well as problems arising out of the capacity to manipulate intelligence and genetic make-up. The course involves some lectures but principally dialogue with medical specialists in internal medicine, surgery, psychiatry, pediatrics, orthopedics and gynecology. Three credit hours.

PHILOSOPHY 160. — Aesthetics I. — Examination of aesthetic issues — creativity, appreciation, interpretation, criticism, art, nature and society — from various philosophical points of view. Students are exposed to alternative philosophical approaches to the aesthetic in the arts as well as in ordinary experience. The course stresses the interaction of philosophical commitment and aesthetic concern and relates the aesthetic enterprise with the mainstream of life experience. Three credit hours.

PHILOSOPHY 163. — The Meaning of Sexuality. — A philosophical inquiry into person as a sexual being, grounded in an intersubjective study of relating and affectivity and emphasizing important attitudes, practices and frameworks including social evolution, moral posture and the perspective of depth-therapies. Through focus on this dimensionality, fuller and deeper understanding of person and community is sought. Three credit hours.

PHILOSOPHY 165. — Utopian Models in Political Philosophy. — Classical designs of ideal societies utopias will be studied to discuss critically the present-day interest in Utopias, their different functions such as blueprints for a better future, forms of escapism, warnings against imminent dangers of a world preoccupied with the idea of technical progress. Among the authors studied will be Plato, More, Bacon, Campanella, Zamiatin, Huxley, Orwell, Skinner. Three credit hours.

PHILOSOPHY 166. — Theory of Communism. — An in-depth analysis of Marxism-Leninism. A study of its basic tenets as applied practically in the socialist world to problems of economics, politics, jurisprudence, education, science, religion, morality and art. Source materials come principally from the classics of Marxism-Leninism and the writings of contemporary theoreticians of the world communist movement. Three credit hours.

PHILOSOPHY 167. — Philosophy of State and Law. — A study of such problems as the nature of the state, political power and authority, law, legal rights and
obligations, etc., as seen from the perspective of several distinct traditions within western philosophical thought. *

**PHILOSOPHY 171 — Philosophy of Science** — Examination and discussion of such matters as empirical and logical foundations and completeness of physical science, quantum theory, relativistic field theory, cosmology. *Three credit hours.*

**PHILOSOPHY 172. — Philosophy of Biology.** — Philosophy of science is studied with particular attention to problems raised by the life sciences; e.g., the origin and nature of life, evolution, death. Focus is primarily upon methodological and philosophical questions, but some consideration is given to issues of social and political importance. Some acquaintance with philosophy and/or biology is desirable. *Three credit hours.*

**PHILOSOPHY 176. — Identity and Consciousness.** — A study of human consciousness, its various levels and states. The course includes a comparative analysis and evaluation of ordinary states of consciousness and so-called altered states physically, psychically or chemically induced. There will be extensive readings, lectures and small group discussions. *Three credit hours.*

**PHILOSOPHY 177. — Philosophers on Women.** — A historical and critical survey of philosophical writings on the subject of women, with special attention to philosophical work by women. These topics will be considered in the context of contemporary, historical and sociological conditions and will be evaluated in terms of their impact upon attitudes toward women in the world of today. *Three credit hours.*

**PHILOSOPHY 180. — God in Modern Philosophy.** — An investigation into the attitude of some outstanding modern thinkers with respect to the natural knowability of God. An effort will be made to evaluate their positions. *Three credit hours.*

**PHILOSOPHY 182. — Philosophy of Religious Experience.** — An examination of religious experience as a specific type of experience: a description of religious experience in its various manifestations, primitive and contemporary, eastern and western; a philosophical investigation of the epistemological and ontological conditions under which this experience is meaningful. *Three credit hours.*

**PHILOSOPHY 184 — Faith & Reason** — A critical examination of religious faith and natural reason as two distinctive ways of knowing, and a consideration of relationships which may exist between these kinds of knowledge, viewed in the light of traditional and contemporary positions. *Three credit hours.*

**PHILOSOPHY 186. — Contemporary Atheism.** — A phenomenological and historical analysis of the nature and origins of the contemporary attitude toward God. Readings will be taken from Freud, Feuerbach, Marx, Nietzsche and the "Death of God" thinkers. *Three credit hours.*

**PHILOSOPHY 188. — Death.** — The philosophical consideration of the contemporary discussion of man and death. *Three credit hours.*

**PHILOSOPHY, 192. — Hegel.** — The course will be a study of the philosophy of Hegel based chiefly on the *Phenomenology of Spirit.* This will include a probing and testing of his positions on the nature of reality and the theory of knowledge. Stress will be put on the philosophy of history, the history of philosophy, the state and religion.
and on their contemporary relevance. *Three credit hours.*

PHILOSOPHY 193. — Kierkegaard. — The course will consist of an attempt to understand and evaluate critically the thought of the father of modern Existentialism. Greatest attention will be given to the questions of the subjectivity of truth and personal transcendence. Throughout an attempt will be made to consider Kierkegaard's work in the light of present problems and in his influence on Sartre, Camus and Marcel. *Three credit hours.*

PHILOSOPHY 195 — Nietzsche — A survey of Nietzsche's thought from the *Birth of Tragedy* to the final, autobiographical *Ecce Homo* with special emphasis on the philosophical poem *Thus Spoke Zarathustra*. The approach will be historical, metaphysical and critical. Nietzsche will be related to previous philosophers and his pertinence to the present situation will be assessed. Special attention will be paid to his epistemology. *Three credit hours.*

PHILOSOPHY 196. — Heidegger. — The course will center primarily on a reading and discussion of Heidegger's *Being and Time*. Special attention will be paid to his criticism of western philosophy; his theory of truth, and the various structures said to be present within the human being. Special attention will be given to the historical and culturally-conditioned situation of man in today's world. *Three credit hours.*

PHILOSOPHY 197. — Sartre. — A study of the rise of existentialist philosophy in its relation to modern philosophy. Sartre's place within the movement. Beginning with *Nausea* the course will move to the more explicit philosophy of *Being and Nothingness*. By exposition and critical analysis the course will relate Sartre to such precursors as Kierkegaard and Nietzsche and to his contemporaries, Camus, Heidegger and Marcel. *Three credit hours.*

PHILOSOPHY 198. — Heidegger and Wittgenstein. — A study in comparison and contrast of two thinkers who stand at the center of two dominant currents of contemporary philosophy, existential phenomenology and linguistic analysis, respectively. Readings will be selected from primary sources. *Three credit hours.*

ADVANCED COURSES

PHILOSOPHY 200. — Seminar: Philosophical Method. — The central themes of this study are the interdependence of language and thought and the critical function of linguistic analysis. These problems will be dealt with by discussing selected texts from the works of Bacon, Locke, Berkeley, Hamann, Lichtenberg, Reinhold, Humboldt, Gruppe, Cassirer, Langer, Whorf, and Austin. *Three credit hours.*

PHILOSOPHY 204. — Seminar: Special Problems in Metaphysics. — A systematic reflection on the metaphysical problems of time, identity, and existence in both their classical and contemporary formulations. *Three credit hours.*

PHILOSOPHY 208. — Seminar: Problems in Theory of Knowledge. — A limited number of advanced students will participate in a critical reflection on the analytic response to such problems as the distinction between (i) true belief and knowledge, (ii) analytic and synthetic statements, (iii) knowledge by acquaintance and by description, (iv) various theories of truth and (v) the phenomenalistic reconstruction and alternatives. (enrollment by arrangement with professor.) *Three credit hours.*

PHILOSOPHY 212. — Seminar: Meta-Ethical Problems. — A critical study of ethical theory within the Analytic tradition. Special attention will be given to the problems of the origin, meaning and justification of ethical terms and judgments as
presented by the Schools of Naturalism, Intuitionism and Emotivism. Post-Emotovist theories will be discussed in respect to their attempt to construct a logic of ethical discourse. Three credit hours.

PHILOSOPHY 216. — Seminar: Aesthetics II. — Selected aesthetic problems explored in depth. While Aesthetics I is not a specific prerequisite for enrollment in the course, some acquaintance with the literature of philosophy and/or the arts is desirable. Three credit hours.

PHILOSOPHY 220. — Seminar: Contemporary Ideologies in America. — A course dealing with the origins, development and current positions of the major ideologies underlying social and political activities in the U.S., viz., Conservatism, Radical Right, Liberalism, Leninism, Trotskyite Marxism, Neo-anarchism, Black Militancy, and Socialist Humanism. Three credit hours.

PHILOSOPHY 224. — Seminar: Philosophy of History. — A study of the various attempts to answer the question: What is the meaning of History? Representative theorists will be chosen from the periods of the Renaissance, 17-18th centuries, the 19th century, and the present. Three credit hours.

PHILOSOPHY 232. — Seminar: Existentialism II. — Seminar examining the major works of several masters of existential philosophy. Choice of texts and authors will vary with semester. Prerequisite: Philosophy 145 or an introductory knowledge of the field. Three credit hours.


PHILOSOPHY 250. — Seminar: Pre-Socratic Philosophy. — The course will study the origin of western philosophy and science before Socrates. It will investigate the relationship between myth and philosophy, the development of various schools of philosophy (Pythagoreans, Eleatics); and conclude with a discussion of the atomists. Emphasis will be placed upon the study of the texts of Pre-Socratic philosophers and the interpretations of modern scholars. Three credit hours.

PHILOSOPHY 254. — Plato. — An introduction to the philosophy of Plato; his dispute with the sophists of his day and his discovery of the theory of Ideas, the consequences of this discovery for his understanding of the life of the soul in terms of love and knowledge, and his last critical reflections on his own theories, developed through a critical reflection on his major dialogues. Three credit hours.
PHILOSOPHY 258 — Aristotle — A detailed examination of selected texts and themes in the works of Aristotle. Typical works to be studied are, the Physics, the Metaphysics, the Treatise on the Soul, and the Nichomachean Ethics. Three credit hours.

PHILOSOPHY 262. — Augustine. — The Neo-Platonic background of the notion of evil, Augustine's personal encounter and struggle with evil, and his solution to the problem of evil. Three credit hours.

PHILOSOPHY 266. — Thomas Aquinas. — An introduction to the philosophical synthesis of Thomas Aquinas, his consideration of God, creation, nature, and man, as seen through a study of his principal writings. Three credit hours.

PHILOSOPHY 270. — Kant. — A reading course in the primary sources, concentrating on the first and second Critiques; the relationship between these two works and their setting in the whole Kantian effort. The meaning of reason and the primacy of the practical use of reason. The influence of Kant on later philosophical writers. Three credit hours.

PHILOSOPHY 274. — Wittgenstein. — Wittgenstein, one of the most influential 20th century philosophers, deeply influenced the Vienna Circle and logical empiricism in general; his later philosophy gave a new turn to philosophy in the English speaking world after World War II. The course will deal chiefly with Wittgenstein's Tractatus Logico-philosophicus and his Philosophical Investigations but will also consider different interpretations of Wittgenstein in contemporary philosophy. Three credit hours.

PHILOSOPHY 295 — Special Topics & Tutorials — Independent study and tutorial work in various subjects suited to the needs and interests of the students. Three or six credit hours.
The Physics Department offers a flexible program of study in physics which may be designed to suit the individual needs of the student. The curriculum leading to the bachelor's degree in physics is designed to provide a thorough foundation in the principal branches of physics. With this background and appropriately selected advanced courses, a student is well prepared for further study leading to advanced degrees in science, medicine, or engineering, or for many positions in research, business, teaching and other fields. Freshmen planning to major in physics are ordinarily enrolled in General Physics (Ph. 23, 24), an intensive year course in mechanics, thermal physics, wave motion, electricity and magnetism, and optics with liberal use of (the) calculus (taken concurrently in the Mathematics Department). Required courses for a major in physics are General Physics (Ph. 23, 24 or Ph. 21, 22), Modern Physics (Ph. 25), Classical Mechanics I (Ph. 121), Electricity and Magnetism I (Ph. 133), Quantum Mechanics (Ph. 143), and Thermophysics I (Ph. 163). Beyond these courses, the student will select with the guidance of his or her departmental advisor a minimum of three courses at the one hundred or two hundred level which will best fit his or her goals. Students majoring in physics are expected to elect at least two laboratory courses. A program of supervised research in theoretical or experimental physics is available to qualified physics majors. Research and student laboratory equipment include a 2 Mev positive ion Van de Graaff accelerator; a 512 channel pulse-height analyzer, satellite tracking equipment, ultraviolet monochrometers, a precision refractometer, a large aperture Twyman-Green interferometer, crystal growing equipment, a 7 inch variable gap precision electromagnet, a 1.5 meter optical spectrograph, a high resolution grating spectrograph (U.V. to far I.R.), an x-ray diffraction system, a 5.5 inch refracting telescope in the College observatory, and a H.P. 9100B calculator. The College also has an I.B.M. 360 computer with time available for student instruction and research. The Department offers a variety of courses for non-science majors including Introduction to Physics (Ph. 41, 42), Astronomy (Ph. 54), Earth Science (Ph. 36), and History and Philosophy of Science (Ph. 39, 40).

PHYSICS 21. — General Physics. — An introduction to the basic concepts of physics using calculus. Three lectures and one (two-hour) laboratory period. Four credit hours.
PHYSICS 22. — General Physics. — Continuation of Physics 21. Three lectures and one (two-hour) laboratory period. Four credit hours.

PHYSICS 23. — General Physics. — An intensive study of the basic principles of mechanics, wave motion, and thermal physics, with liberal use of the calculus. Primarily for physics majors. Three lectures and one (two-hour) laboratory period. Four credit hours.

PHYSICS 24. — General Physics. — Continuation of Physics 23. An intensive study of the basic principles of electricity and magnetism and optics. Three lectures and one (two-hour) laboratory period. Four credit hours.

PHYSICS 25. — Modern Physics. — Introduction to the basic concepts of modern physics including special relativity, the particle aspects of electromagnetic radiation, the wave aspects of material particles, atomic structure, nuclear structure and reactions, and elementary particles. Prerequisite: Ph. 21, 22 or Ph. 23, 24. Three credit hours.


PHYSICS 39. — History and Philosophy of Science I. — Beginning with Snow's "two cultures," a study is made of the method of science as proposed by Conant, Kuhn, Butterfield, and others. Developments leading to the Copernican theory, Galileo, Brahe, Kepler, and Newton's laws of motion; theories of the origin of the solar system and of the celestial universe; Greek and Babylonian contributions to mathematics. Intended for non-science majors. Three credit hours.

PHYSICS 40 — History and Philosophy of Science II — Continuation of Physics 39. The concept of truth and reality in modern science according to Margenau, Bronowski, and others; the place of probability in science. Some major developments in chemistry from Democritus through Lavoisier to the modern concept of atomic structure; ancient and modern teaching on evolution, Mendel and Darwin; discussion of the wave-particle duality in nature, measurement of the velocity of light, relativity concepts, nuclear fission and fusion. Three credit hours.

PHYSICS 41. — Introduction to Physics I. — Elective for non-science majors. Topics are selected from classical physics, Einstein's relativity, atomic and nuclear physics, and elementary particle physics. Three credit hours.

PHYSICS 42 — Introduction to Physics II — Continuation of Physics 41. Three credit hours.

Three lectures. *Three credit hours.*


**PHYSICS 52 — Topics in Biophysics —** The topics to be discussed in this introductory course in biophysics: mathematical treatment of data, physical aspects of vision, physical aspects of hearing, light absorption effects, physical aspects of muscle, methods determining molecular size and shape, physics of cell electrophoresis, and electrical systems in biology. Three lectures. Prerequisites: at least one college level course in physics and one in biology. *Three credit hours.*

**PHYSICS 54 — Astronomy —** A survey of the present view of the universe and an examination of the assumptions, measurements, and reasoning, upon which astronomical knowledge is based. Lectures will be supplemented with direct observation of astronomical phenomena. Three lectures. *Three credit hours.*

**PHYSICS 81. — Introduction to Astrophysics. —** A survey course at the introductory level of selected topics of current interest in astrophysics such as solar physics, neutron stars, quasars and various cosmological models for the origin of the universe. This course is designed for science majors who have had one year of general physics. Three lectures. *Three credit hours.*

**PHYSICS 91. — Honors Seminar. —** A seminar on selected topics in physics offered in conjunction with the Office of Special Studies for students participating in the Honors Program. *Three credit hours.*

**PHYSICS 111 — Modern Physics Laboratory —** Taken concurrently with Physics 143. *Three credit hours.*

**PHYSICS 115. — Optics & Optical Instrumentation. —** Optical instrumentation is now involved in virtually every phase of scientific and technologic endeavor. In this course the basic principles and use of such instruments as the camera, compound microscope (including phase contrast, interference, and polarizing types), telescope (reflecting and refracting), interferometer, spectrograph, spectrophotometer, polarimeter, refractometer, and holographic equipment will be studied. *Three credit hours.*
PHYSICS 116. — Optics Laboratory. — Taken concurrently with Physics 115. Three credit hours.

PHYSICS 121. — Classical Mechanics I. — Vector algebra, kinematics and dynamics of a particle in one dimension (including linear oscillator), motion in two and three dimensions (projectiles, central force problems), motion of a system of particles, collision problems, the two-body problem. Coupled systems & normal coordinates, beat phenomena. Three credit hours.

PHYSICS 122. — Classical Mechanics II. — Moving coordinate systems, generalized coordinates, constraints, Lagrangian and Hamiltonian dynamics, rigid body dynamics, inertia and stress tensors, small vibrations and normal modes, elastic waves. Three credit hours.

PHYSICS 131 — Electrical Measurements Laboratory — Taken concurrently with Physics 133. Three credit hours.

PHYSICS 133 — Electricity and Magnetism I — Electrostatics, Laplace and Poisson equations, dielectrics, electrostatic energy, electric current, magnetic fields, electromagnetic induction, magnetic energy, Maxwell's equations, plane waves, energy and momentum of electromagnetic radiation. Three lectures. Prerequisite: Ph. 22 or Ph. 24. Three credit hours.

PHYSICS 134 — Electricity and Magnetism II — Wave guides, spherical waves and the wave equation with sources, microscopic theory of dielectrics and magnetic materials, electromagnetic properties of superconductors. Prerequisite: Ph. 133. Three credit hours.

PHYSICS 135. — Electronics. — A/C circuit analysis and filter theory. A study of the characteristics of semiconductor diodes, transistors, vacuum and gas filled electron tubes. The basic circuits in which these devices are used. Three lectures. Prerequisite: Ph. 22 or Ph. 24. Three credit hours.

PHYSICS 136. — Electronics Laboratory. — Taken concurrently with Physics 135. Three credit hours.

PHYSICS 143 — Quantum Mechanics — The postulates of quantum mechanics, one-dimensional problems, and three-dimensional problems, including the hydrogen atom. Perturbation theory and its applications. Three credit hours.


PHYSICS 154 — Theoretical Physics — Selected topics in theoretical physics. Three credit hours.

PHYSICS 156 — Nuclear Physics Laboratory — Taken concurrently with Physics 144. Three credit hours.

PHYSICS 161 — Solid State Laboratory — Selected topics in solid state physics
will be covered. Experiments are available in x-ray diffraction, transport properties of metals and semiconductors, solid state spectroscopy at very low temperatures, and magnetic resonance. Three credit hours.

PHYSICS 163 — Thermophysics I — The laws of thermodynamics are developed and applied to the properties of matter. Topics discussed include the three thermodynamics laws, entropy, potentials, conditions of equilibrium, low temperature phenomena. Statistical mechanics is developed and includes the canonical and grand canonical distributions with applications to kinetic theory, quantum statistics of a perfect gas (non-degenerate & degenerate cases), heat capacities, paramagnetism, black body radiation, Fermi-Dirac & Bose Einstein statistics. Three credit hours.

PHYSICS 164 — Thermophysics II — This course is a continuation of Thermophysics I with applications of thermodynamic & statistical principles to the solid state & astrophysics. In the physics of solids topics include crystal structure, diffraction of waves by crystals, free electron theory of metals and thermal, dielectric, optical and magnetic properties of solids; band theory, semiconductors, magnetic resonance. In astrophysics: structure and evolution of stars. Prerequisite: Thermophysics 163. Three credit hours.

PHYSICS 201, 202 — Undergraduate Research — A program of supervised research above and beyond the level of regular course offerings. The work may be theoretical and/or experimental and is designed to bridge the gap between the undergraduate and postgraduate levels. Six credit hours.

PHYSICS 203, 204 — Physics Seminar — Six credit hours.

PHYSICS 205, 206 — Independent Study — Six credit hours.
Political Science

Professor: Higgins
Associate Professors: Duff, Ford, Huang, Odell (Chairman)
Assistant Professors: Copson, Dommel
Instructor: Jones

Political Science is the systematic study of man's political behavior in society. It studies political activity as it is affected by changing political processes, developments, and situations, the motivation and action of individual leaders, public officials, social and economic groups, public opinion, and the process by which public policy is fashioned. It investigates the nature and purpose of political authority, the principles upon which it rests, the role of the state in achieving the "good life," the relationship between man and his government, the struggle for control of the state, problems of legislation and administration, the legal aspects of political phenomena, judicial control of the political process, civil rights, and the relations of states in the family of nations. A major in political science requires a minimum of ten semester courses, including Political Science 11. A maximum of fourteen semester courses may be taken. In selecting courses, majors are strongly encouraged to undertake a balanced program of studies. This would include courses in American politics, political theory, and internation-comparative-regional politics.

The Department participates in the national and college Advanced Placement Programs.

Honor students are afforded opportunities to participate in seminars and research projects by arrangement with the Department.

POLITICAL SCIENCE 11 — Introduction to Political Science — This course is designed to give the students an understanding of the scope and method of political science through a study of selected classics and other important books in the field. The significance of these works as examples of normative, behavioral and institutional approaches will be stressed. Three credit hours.

POLITICAL SCIENCE 100 — Principles of American Government — Survey of the major philosophical, constitutional and institutional features of American national government stressing the topics of constitutional background, the Presidency, Congress, Judiciary and the issues of public policy illustrating the processes and institutions of the federal government. Three credit hours.

POLITICAL SCIENCE 101 — The American Presidency — An introduction of the study of the Presidency, its constitutional basis, historical growth and development, and relationships to the coordinate branches of the federal government; special attention will be paid to the expansion of the office in the twentieth century, especially in
regard to domestic economic policies and international developments. *Three credit hours.*

**POLITICAL SCIENCE 102 (Formerly P.S. 132) — Government and Business —**
A study of the goals and tactics of American business in the American political process; an analysis of the political impact of business firms and associations including their tactics and legislative goals; students perform independent research into specific firms, industries or organizations, and will be expected to present oral and written reports which will form the basis for class discussion. *Three credit hours.*

**POLITICAL SCIENCE 103 (Formerly P.S. 105) — American Political Parties —**
A functional analysis of American political parties stressing operational and structural problems of the modern party system; special emphasis will be placed on voting behavior of the American electorate, campaigning tactics and techniques, and the use of public relations techniques to attract and hold voter allegiances. *Three credit hours.*

**POLITICAL SCIENCE 105 — U.S. Congress —** A study of the organization and behavior of the Congress with emphasis on the committee system and the relations to other branches of government. *Three credit hours.*

**POLITICAL SCIENCE 106 — Judicial Behavior —** A study of the function and organization of the American Judiciary. *Three credit hours.*

**POLITICAL SCIENCE 110 (Formerly P.S. 109) — Politics and the National Bureaucracy —** A survey of the political characteristics of public administration with special emphasis on the relationships between the executive, legislature, judiciary and bureaucracy in the formation of public policy. The focus will be on public administration and policy formation at the national level. *Three credit hours.*

**POLITICAL SCIENCE 111 — Public Policy —** Analysis of the making of public policy in both domestic and foreign policy areas. The focus is on who gets what, why and how in the policy process; what are the barriers to greater assertion of the “public interest” in political decision-making. Case studies are used. *Three credit hours.* (Not offered in 1973-74).

**POLITICAL SCIENCE 112 — State and Local Government —** A survey of the politics of state and local government. Attention is given to the structure of government, political behavior of the voter, and political conflict at the state and local levels. *Three credit hours.* (Not offered in 1973-74).

**POLITICAL SCIENCE 113 — Government and Politics of Metropolitan Areas —**
The nature of the modern metropolitan phenomenon and the effect it has on government and politics. Approaches to metropolitan problems and solutions with special attention given to poverty and welfare, housing, and transportation. *Three credit hours.*

**POLITICAL SCIENCE 114, 115 — Urban Politics —** A study of the political issues, processes and realities underlying urban problems faced by municipalities in responding to social, economic and physical change. *Six credit hours.* (Not offered in 1973-74).

**POLITICAL SCIENCE 120, 121 — Constitutional History of the United States —**
An examination of the origin and content of the Constitution, of the nature of the federal republic and the presidential system, of the development of the Constitution and of current constitutional problems. *Six credit hours.*
POLITICAL SCIENCE 122, 123 — Civil Rights — Liberty and Property; Equal Protection and Racial Discrimination; First Amendment Freedoms; Procedural Due Process; the Implications of Ordered Liberty. Six credit hours.

POLITICAL SCIENCE 124, 125 — Constitutional and Legal History of England — Origin and development of the parliamentary system and the common law. Offered as History 133, 134. Three credit hours.

POLITICAL SCIENCE 141, 142 — History of Western Political Thought — Analysis of the political thought of western civilization from Ancient Greece to the present. Readings in the first semester include works of Plato, Aristotle, Cicero, St. Augustine, St. Thomas and Machiavelli. Readings in the second semester include works of Hobbes, Locke, Rousseau, Burke and Marx. Lectures are based on texts, the works of other political theorists, commentaries and historical sources. Six credit hours.

POLITICAL SCIENCE 143 (Formerly P.S. 189) — Behavioral Approaches in Political Science — A survey of the newer “scientific” theories and methods in Political Science. Topics include systems analysis, political socialization studies, content analysis, and voting behavior studies. Elementary quantitative techniques will be emphasized, and a class project using the computer will be undertaken. Three credit hours.

POLITICAL SCIENCE 144 — Modern Chinese Political Thought — Main trends of Chinese political thought will be examined in the context of political development in the modern period, with emphasis on the political ideology of the Ta'iu Ta'ip'ing revolution and the political theories of Li Hung-chang, K'ang Yu-wei, Liang Chi-ch'ao, Sun Yat-sen, and Mao Tse-tung. Three credit hours.

POLITICAL SCIENCE 145 — American Political Thought — American political thought of the 20th century with emphasis on the theory of contemporary political scientists. Three credit hours.

POLITICAL SCIENCE 150, 151 — Comparative Politics of the Major Western European Powers — Survey of various approaches to the study of comparative politics in historical perspective. In-depth analysis of the political culture, structure, process, performance and development of the governments of Italy, Great Britain, France and West Germany. Six credit hours. (Not offered in 1973-74, 1975-76).


POLITICAL SCIENCE 153 — The Fifth French Republic — A survey of the development, operation, and performance of the Fifth French Republic, with special emphasis on civil-military, public-private, and international relations. Three credit hours. (Spring offering. Not offered in 1973-74, 1975-76).

POLITICAL SCIENCE 154, 155 — Comparative Politics of the Minor Western European Powers — Survey of various approaches to the study of comparative politics in historical perspective. In-depth analysis of the political culture, structure, process, performance and development of the Republic of Ireland, Benelux and Scandinavia. Six credit hours. (Not offered in 1973-74, 1974-75).
POLITICAL SCIENCE 156 — Politics of European Union — Survey of the economics, political, and military aspects of the efforts to achieve European integration in light of the Soviet and American challenges. Special emphasis on the spill-over versus formal integration approach to a United States of Europe. Three credit hours. (Spring offering. Not offered in 1973-74, 1974-75).

POLITICAL SCIENCE 157 — Politics of the United Kingdom — An historical, theoretical and practical survey of Britain's corporate government and politics, with special emphasis upon the problems of Northern Ireland, Common Market, and Southern Rhodesia. Three credit hours. (Fall offering, not offered in 1973-74, 1975-76).

POLITICAL SCIENCE 158 — Politics of the Soviet Bloc — Survey of the development, operation and performance of the governments of East Central Europe since World War II, with special emphasis on Stalinism, de-Stalinization, and national communism. Critical examination of the totalitarian, group, and articulation approaches to their politics and decision-making. Three credit hours. (Spring offering, not offered in 1973-74).

POLITICAL SCIENCE 159 — Politics of West Germany — Survey of the development, operation, and performance of the Bonn system with special emphasis on denazification, Adenauer, changes with the Social Democrats, and the opening to the East. Three credit hours. (Fall offering, not offered in 1973-74, 1974-75).

POLITICAL SCIENCE 166 — 19th Century United States Diplomacy — A description of this course will be found under History 107. Three credit hours.

POLITICAL SCIENCE 167 — 20th Century United States Diplomacy — A description of this course will be found under History 108. Three credit hours.

POLITICAL SCIENCE 170, 171 — International Relations — Major topics from the field of International Relations; including the international system and its development, the components of national power and the distribution of power, arms and arms control, conflict and conflict resolution, reason of state and the morality of nations, the United Nations. Six credit hours.

POLITICAL SCIENCE 172 (Formerly P.S. 174) — Politics of the Developing States — The role of elites, social classes, political parties, the military, revolution and ideology in the politics of developing states. Emphasis on the African states and India. Three credit hours.

POLITICAL SCIENCE 173 — Africa in World Politics — Political questions which affect African international relations and the relations of African countries with outside powers will be discussed. Topics include conflict and integration within Africa, pan-Africanism, the O.A.U., the crisis in southern Africa, the French role in Africa, and U.S. policy toward the African states. Three credit hours.

POLITICAL SCIENCE 180, 181 — Permanent Problems of Politics — The basis, functions and limits of the political order; the roles and rights of the citizen; the State and its relation to society; politics and the economic order; authority vs. freedom; the control of power; the external relations of the State and the emerging inter-State system; the dynamics of political change. Six credit hours.

POLITICAL SCIENCE 182 — Contemporary Christian Political Perspectives — An analysis of the pronouncements and positions of Roman Catholicism at Vatican II and in papal encyclicals and of non-Roman Christianity in the statements of the

POLITICAL SCIENCE 184 — Current Political Issues — An examination of some of the factors of the present crisis: race, militarism and intervention, poverty, student protest, protest, crime and world economic inequality. Three credit hours.

POLITICAL SCIENCE 186 — Peace as a Political Problem — An examination of the causes of war and the political institutional efforts for its elimination. Three credit hours.

POLITICAL SCIENCE 191 — Chinese Government and Politics — Political development in the People's Republic of China from the formative years of the Communist revolution to the post-Cultural Revolution period. Special attention will be given to political culture, political socialization, the state and party system, agricultural collectivization, and pattern of industrialization and modernization. Three credit hours.

POLITICAL SCIENCE 192 — Government and Politics in Southeast Asia — Comparative study of the political developments in Burma, Malaysia, Singapore, Indonesia, the Philippines, Thailand, Cambodia, Laos, and Viet Nam, focusing on such common problems as legacy of colonialism and conquest, nationalism, Communism, neo-colonialism, crises, leadership patterns, and modernization processes. Three credit hours.

POLITICAL SCIENCE 193 — The United States and China — The relations between the United States and the People's Republic of China will be analyzed in terms of cultural heritages, ideological difference, policy postures, areas of conflict, and normalization process. Three credit hours.

POLITICAL SCIENCE 196 — Government and Politics in East Asia — Comparative study of the political developments in China, Japan, and Korea, with special attention to responses to Western influence, quests for independence and industrialization, and evolutions of present political systems. Three credit hours.

POLITICAL SCIENCE 201, 202 — Tutorial Seminar — Research with individual reports on selected topics or projects. Approval of the Professor and the Department is necessary. Three credit hours.

POLITICAL SCIENCE 203 (Formerly P.S. 208) — Seminar on Urban Policy — Study of intergovernmental factors affecting urban problems and the political conflicts that hinder their solution. Special attention is given to the problems of housing and pollution. Field studies of Worcester are conducted. Three credit hours.

POLITICAL SCIENCE 204 — Seminar on International Relations — A single topic of major importance in the field of International Relations will be discussed. The topic may be one of the following: economic explanations of international behavior;
behavioral approaches to the study of International Relations; or the analysis of international conflict. Interested students should discuss the proposed topic with the instructor before enrolling. *Three credit hours.*

**POLITICAL SCIENCE 205 — Seminar in Religion and Politics** — A critical study of the thought which has explained, at various stages in history, the relation of Christians and Christian institutions to the realm of politics. This examination includes an analysis of the degree to which traditional explanations are sufficient for contemporary experience. *Three credit hours.*

**POLITICAL SCIENCE 206 — Seminar on Hegel and Marx** — An intensive study of Hegel’s Philosophy of Right and Philosophy of History followed by an examination of selections from Marx and Marxist authors. The seminar is designed to note the significance of Hegelian concepts and the ways these concepts have been adopted by historical and contemporary Marxist writers. *Three credit hours.* (Not offered in 1973-74).

**POLITICAL SCIENCE 207 — Seminar in Chinese Politics as Seen Through Chinese Literature** — Analysis of Chinese social structures, political norms, and behavior patterns as reflected in popular literature, both classical and contemporary, including novels, plays, short stories, and poems. *Three credit hours.*

**POLITICAL SCIENCE 208 — Seminar on the Supreme Court and Religion** — This course is offered by the Department of Religious Studies as Religious Studies 177. *Three credit hours.*

**POLITICAL SCIENCE 209, 210 — Seminar on the Warren and Burger Courts** — A study of the personnel of the Supreme Court, its congressional relations, political and bloc behavior, and constitutional policies. *Six credit hours.*

**POLITICAL SCIENCE 211 (Formerly P.S. 219) — Seminar on International Law** — A survey of important legal problems in modern international relations, including the regulation of force, human rights, crimes of war, recognition, and proportionality. *Three credit hours.*

**POLITICAL SCIENCE 212 — Seminar on Pressure and Interest Group Behavior** — A systematic study of American political pressure groups, including types of groups operating in the political system, their tactics, goals, and functions: special emphasis upon lobbying activities, group infiltration of administrative and regulatory agencies, and statutory controls upon such activity; selected case studies of pressure groups and their effects upon public policy and legislation. *Three credit hours.*
The course of studies in Psychology is made up of a core curriculum, electives in Psychology, and required courses from allied fields. The program is arranged to provide the student with undergraduate preparation for advanced study in this area as well as a breadth of view consonant with the liberal arts tradition of Holy Cross. Introductory Psychology, History and Systems of Psychology, Experimental Psychology and Laboratory, Statistics, and two electives in Psychology constitute the core curriculum. Courses from allied fields include: Biological Sciences, Mathematics, and Computer Science. Individual experimental projects are encouraged to foster a research spirit and student-professor exchange.

PSYCHOLOGY 41, 42 — Introductory Psychology. — A general introduction to the principles of psychology as operative in motivation, learning, perception, and thinking. Application of these principles to areas of emotion, social processes, assessment of abilities, personality, and biological substrates of behavior is also stressed. This course is structured for psychology majors. Six credit hours.

PSYCHOLOGY 43 — Contemporary General Psychology. — The contributions of psychology to an understanding of human and animal behavior are surveyed. Learning, motivation, emotion, psychological assessment, and abnormal process are among the several topics considered. Three credit hours.


PSYCHOLOGY 45 — History and Systems of Psychology. — The origin of Psychology and the development of theoretical systems within Psychology are assessed. The main psychological systems: Introspectionism, Behaviorism, Gestalt School, Psychoanalysis, and Hormic Psychology are treated in their historical development. Three credit hours.

PSYCHOLOGY 47; 48 — Experimental Psychology and Laboratory — The methods and techniques of Experimental Psychology and their application to various content areas are treated. Selected topics within the areas of sensation, perception, learning, problem solving, social process, and physiology of behavior are investigated in the laboratory. An original experiment, designed and researched by the student, is
required. Eight credit hours.

PSYCHOLOGY 52 — Physiological Psychology — The structure and function of the nervous system and endocrine glands are studied with reference to man's behavior. The physiological and neural aspects of motivation, emotion, learning, sensation, and perception are emphasized. Three credit hours.

PSYCHOLOGY 103 — Psychology of Learning — A presentation and evaluation of the principles of learning theory. Conditioning, transfer of training, and development of human learning and memory are discussed. Three credit hours.

PSYCHOLOGY 114 — Abnormal Psychology — A general introduction to the origin, development, classification, diagnosis, and treatment of psychological ills. A history of the treatment of mental illness and the theoretical basis of different schools of therapy are surveyed. Three credit hours.

PSYCHOLOGY 116 — Group Process in Psychology — Group theory, principles and techniques are presented and evaluated. The historical development and research in group dynamics as well as current trends in group processes are examined. An opportunity will be provided to conduct research and evaluate topics such as group structure, development, leadership and maintenance. Three credit hours.

PSYCHOLOGY 117 — Social Psychology — Principles in interpersonal perception and human cognition serve as a framework for discussions of attitude structure and change, group processes, and aggression. The application of general principles to human interaction labs and group observation is discussed with explicit reference to existing experimental evidence. Three credit hours.

PSYCHOLOGY 119 — Developmental Psychology — An analysis of the factors underlying behavior at different stages of development with an examination of the role of maturation, motivation, experience, and culture in the sequences of changes in psychological process. Three credit hours.

PSYCHOLOGY 122 — Theories of Personality — A summary and evaluation of the major contemporary theories of personality are presented. Among the theories discussed are those of Freud, Jung, Sullivan, Lewin, Allport, Rogers, Murphy. Three credit hours.

PSYCHOLOGY 124 — Exceptional Child Practicum — The experience of helping exceptional children is combined with theoretical discussion of problems encountered in such work. Under professional supervision, students will establish a relationship on a weekly basis with a mentally retarded, an emotionally troubled and an economically disadvantaged child. A classroom seminar will meet weekly. Course open with permission of instructor to majors who have completed Psychology 119. Three credit hours.

PSYCHOLOGY 126 — The Black Family: A Psychology Perspective — An examination of the psychological forces in the Black Family and how they operate on the development of the individual. Several areas will be explored: the unique structure of the Black Family, the experiences within the Black Family and their effect on the various dimensions of family life; the effect of the social context on the development of individual family members. Three credit hours.

PSYCHOLOGY 127 — Introduction to Counseling and Psychotherapy — An historical and critical evaluation of traditional methods of counseling and psychotherapy. Psychoanalytic, behavioral, directive, and non-directive techniques will
be discussed. Behavioral therapy will be especially stressed. *Three credit hours.*

**PSYCHOLOGY 203 — Advanced Statistics I** — The relationship between statistical procedures and theoretical problems encountered in designing psychological experiments is presented. Topics covered include: sets, functions, probability, and distributions. This course is available to students who have completed elementary statistics requirements. *Three credit hours.*

**PSYCHOLOGY 204 — Advanced Statistics II** — Complex analyses of variance, trend analysis, and analysis of covariance are related to theoretical issues in psychological research. This course is available to students who have completed Psychology 203. *Three credit hours.*

**PSYCHOLOGY 207 — Ethical Problems in Behavioral Research and in Clinical Psychology** — The first part of the course will examine the relationship of power, sponsorship, availability of the results to the rights of the researcher and the rights of those studied. The second part deals with problems linked to values the clinical practitioner holds and the rights of the recipient of the help. Consent of minors, confidentiality, etc., also will be discussed. *Three credit hours.*

**PSYCHOLOGY 211, 212 — Research Projects** — Students who are especially interested and who have sufficiently high grades may assist faculty members in their research. Their assistance may take the form of library research, bibliography organization, data computation and analysis, and administration of experiments. Under faculty direction, students may undertake their own projects. Either both semesters or one semester may be taken. *Six credit hours.*

**PSYCHOLOGY 213 — Drugs and Human Behavior** — The influence of drugs on man's behavior. The physiological, psychological, and social consequences of various psychoactive agents. Examination of tranquilizers, anti-depressants, psychotomimetic, and addicting drugs. Prerequisite: Physiological Psychology. *Three credit hours.*
The Department of Religious Studies has a two-fold function — that of serving the general student body in a liberal arts college and that of preparing students who wish to concentrate in the area of Religious Studies for their future work.

Believing that religion is a fundamental dimension of the human experience that deserves to be studied for that reason alone and also that our students are in the process of coming to terms with their own traditions and personal identities, we have designed courses for the student body at large that will enable them to achieve both these purposes. Since, at the present time, the majority of the students at Holy Cross come from a Roman Catholic tradition, we feel it necessary to acquaint them with this tradition but also to situate it in the larger context of other religious traditions as well as the broader cultural context in which they live. Students from any tradition, however, must come to terms with historical relativity and with the fact of pluralism — both religious and cultural. Our courses are designed to help them achieve this.

Because the field of Religious Studies is multidimensional, a program for the majors must acquaint them with each of these dimensions, biblical, ethical, philosophical, historical, as well as enable them to pursue in depth the particular area of their own interest. Each major chooses a faculty advisor in the Department with whose help he/she plans a program suited to his/her interest. A major is required to take ten courses in the Department. For those students who intend to pursue graduate studies, we strongly advise competence in the classical and modern languages, as well as the social sciences and philosophy, and encourage them to pursue a research project in their senior year.

The size of the Department promotes close student-faculty contact, an atmosphere of community, and ample opportunity for tutorials and independent study.

INTRODUCTORY

introduction to the origins of the Judaic-Christian tradition as reflected in the literature of the New Testament. Three credit hours.

RELIGIOUS STUDIES 013 — 20th Century Religious Thought — An analysis and appraisal of the writings of the more prominent contributors to modern religious thought. Three credit hours.

RELIGIOUS STUDIES 015 — Theology of History — A consideration of the various philosophical and theological meanings of the historical process with particular attention to be given to full Christian dimension of history that was initiated by the coming of Christ. Three credit hours.

RELIGIOUS STUDIES 016 — Divine Inconsistency: An Unconventional Introduction to the Old Testament — The variety of perspectives displayed in the Bible are brought into focus, taking note of the polarizations and harmonizations that developed in creative tension, producing the position statements found in the present canon of scripture. The approach makes progressive inquiry into the historical and theological forces underlying Biblical statements to see if they say anything to our age. Three credit hours.

RELIGIOUS STUDIES 018 — Rise of Early Christianity — New Testament Introduction — A course on the Jewish and the Graeco-Roman setting of Early Christianity, Jesus of Nazareth, the beginnings of the Christian Church, Paul, the Gospels, and the situation of Early Christianity toward the end of the first century C.E. Includes lectures, readings from primary (Jewish, Graeco-Roman, New Testament, and other Early Christian) and secondary sources, and discussions. Three credit hours.

RELIGIOUS STUDIES 019 — Ancient Church (2nd & 3rd Centuries) — A course on the history of Early Christianity from the “post-apostolic” period to Emperor Constantine. Discusses the setting for and the forms and development of Early Christianity in the different areas of the Mediterranean World. Includes lectures, readings from primary (in English) and secondary sources, and discussions. Three credit hours.

RELIGIOUS STUDIES 021 — Dig Israel! The Archaeology of the Holy Land — A bold survey of the history of emerging civilization as revealed by archaeology, focusing principally on Palestine and the Levant. The historical framework of the Bible forms the central core of the course, but a general introduction to the techniques of archaeological investigation is included. Three credit hours.

RELIGIOUS STUDIES 022 — Beginning in Archaeology: A Wholistic Approach to the Recovery of Man’s Past — The course provides a general introduction to archaeology in its variety of analytical and interpretive modes. The techniques of the natural and social sciences and the interpretive perspectives of the humanities are worked into the total approach. Archaeology world-wide is surveyed, but the focus is on the pre-classical Near East. Three credit hours.

RELIGIOUS STUDIES 023 — The Emergence of Judaism — Pharisaic and Rabbinic literature of the first century BC and the first two centuries AD provide the basic materials. They will be studied, however, in the broad framework of the socio-cultural and religious impulses in ferment in the era from Ezra to Judah the Prince, and compared to diverging movements including primitive Christianity. Three credit hours.

RELIGIOUS STUDIES 024 — The Old Testament: The Message of the Wisdom Writers — In the books of Proverbs, Ecclesiastes, Job and Ecclesiasticus, the wisdom writers examine, reflect upon and interpret experience until certain insights emerge
and principles develop that enable man to understand his situation in life and thus to function more efficiently. Special emphasis is given to the book of Job as man’s most searching attempt to discover God through experience. Three credit hours.

RELIGIOUS STUDIES 026 — Old Testament — An introduction to Old Testament studies with emphasis on the historicity and meaning of the Old Testament, on literary genres, and on the use of myths and symbolism. Three credit hours.

RELIGIOUS STUDIES 036 — American Religious Experience — How and why have Americans believed and practiced their religions? Protestants, Catholics, Jews “pagans and infidels” have all contributed to the mix: is it American? is it Christian? Readings in primary and secondary sources, discussion. Three credit hours.

RELIGIOUS STUDIES 038 — Christ Myth in European Culture — What has Christ meant to the peoples of Europe? How did He come to dominate their lives? A study of the development of the Christian theodicy, its intellectual formulation, sociological consequences and aesthetic productivity. Source readings in Christian creeds and theology, slide presentations and discussion. Three credit hours.

RELIGIOUS STUDIES 041 — Contemporary Christian Morality — A suggested methodology for evaluating contemporary Christian thought and practice in major areas of ethical concern. An in-depth disoussion of responsible decision-making in an age of situationism and ethical relativism, with detailed application to crucial moral dilemmas facing modern man. Three credit hours.

RELIGIOUS STUDIES 044 — Discovery of God. — Analysis, evaluation, personal application of the questings after the meaning of human existence as delineated in the thought of a contemporary Jesuit thinker, Henri de Lubac: The Drama of Atheistic Humanism and the Discovery of God. Three credit hours.

RELIGIOUS STUDIES 045 — Towards the Christian Body - Person. — A consideration of the full implications of the Incarnation for contemporary man. A sketch of the Matter-Spirit dichotomy in hellenized Christian thought; the effect of this split in many areas of doctrine and living. Recent efforts to restore effective appreciation of human integrality, e.g. the writings of Eugene Kennedy. Three credit hours.

RELIGIOUS STUDIES 046 — Human Living in Teilhard — (seminar). Tracing the primacy of the “Humanism” in the writings of Teilhard. Man’s ultimate importance both from the standpoint of Evolution (Cosmogenesis) and the Incarnation (Christogenesis). Growing psychosocial awareness, process of amorization (love energy), in mankind or “evolution made conscious of itself”. Contemporary applications. Three credit hours.


RELIGIOUS STUDIES 048 — Faith Quest of Martin Buber — A sampling of the works of this great Jewish thinker, with emphasis on the bases in his thought of the light shed on the existence of a personal God from an analysis of personhood (I-Thou relation). Three credit hours.

RELIGIOUS STUDIES 050 — Religion and Experience — An introduction to the nature and function of religious experience beginning with some specific examples in
individual biographies and then reflecting on this data using such categories as "sacred and profane", "the holy", secularization. Readings in Novak, Otto, Eliade, James, etc. Three credit hours.

RELIGIOUS STUDIES 051 — What a Modern Catholic Believes — Topics and questions requiring the attentive involvement of intelligent Christians today. A stimulus to collegians to engage themselves actively in the formation of a sound theology for tomorrow - as orientation in their professional, interpersonal, familial relations. Questions of belief about God, sin, moral problems, sex, death, women, conscience, heaven and hell, suffering and evil. Three credit hours.

RELIGIOUS STUDIES 052 — Religions of India — An introduction to the three major sources of Indian religious thought and life — Hinduism, Buddhism, and Islam. The course will include a study of the Hindu tradition from its Vedic beginnings to Vaisnavism and Saivism — the emergence of Buddhism and the early teachings of Theravada and Mahayana — the advent of Islam, Indian Sufism, and modern reform. Three credit hours.

RELIGIOUS STUDIES 054 — Buddhism — (seminar). A study of the Buddhist experience emphasizing its beginnings in India (life and legends of the Buddha, development of Theravada and Mahayana) as well as developments in China and Japan. Three credit hours.

RELIGIOUS STUDIES 056 — Theology and Imaginative Literature — An introductory course in religion and literature dealing with the religious dimension of great literary texts from Aeschylus to Updike. The texts are chosen to illustrate the three great stories in our tradition: the Greek story, the Christian story and the Modern story. Three credit hours.

RELIGIOUS STUDIES 058 — Religion and Literature — (seminar). An introduction to religion and literature. Literary texts ranging from Aeschylus to Updike are discussed in terms of their religious meaning and power. Three credit hours.

RELIGIOUS STUDIES 061 — Jesus — What can we really know about Jesus? Some of the areas to be discussed: Jesus and his times; Jesus and the revolutionaries; Jesus and women, Jesus and the poor; the Jesus of the early Church; the Jesus of the contemporary Church; the Jesus movement; Jesus Christ - Superstar? - or, in short, "will the real Jesus please stand up!" Three credit hours.

RELIGIOUS STUDIES 063 — Islam — (seminar). A study of the formation of Islamic thought focusing on its sources (Quran, Sunnah, Shariah, etc.) with a view toward understanding contemporary Islam and the problems of modernism. Three credit hours.

RELIGIOUS STUDIES 066 — Introduction to East Asian Religions (China and Japan) — A critical study of selected religious phenomena in China and Japan with particular attention to the interaction of Mahayana Buddhism with the indigenous traditions — Taoism, Confucianism and Shinto. Three credit hours.

RELIGIOUS STUDIES 071 — Prophets and Sages East and West — A comparative study of selected religious leaders from Eastern and Western religious traditions. Among those considered will be Jeremiah, Socrates, Jesus, Martin Luther King, Jr., Confucius, Buddha, Muhammad, and Gandhi. Three credit hours.

RELIGIOUS STUDIES 073 — Religion and Poetry: Hopkins — Gerard Manley Hopkins was a Victorian and Jesuit priest whose poems had a decisive impact upon modern poetry. A detailed analysis of these poems reveals all the facets of this
enigmatic poet: his life and times, his personality and Jesuit training, his theological thought and religious sensibilities, his innovative poetic theory, and his unique view of nature and God. Three credit hours.

RELIGIOUS STUDIES 076 — Magic, Witchcraft and Religion — The purposes, types and natures of magic; its relation to the myths, rituals, and ecstatic states of religion. Readings in Otto, Seligmann, and Mair. Three credit hours.

RELIGIOUS STUDIES 081 — Women’s Liberation and the Church — Historical survey of the oppression of women and efforts at women’s liberation. The demand of women for greater participation in the life of the church, its theological bases, and its effect on the future of the church. Readings in DeBeauvoir, Marcuse, Doley. Three credit hours.

RELIGIOUS STUDIES 086 — A Theology of Death and Dying — Death as seen in scripture and in religious tradition. The question of suicide. The problem in assisting the ill to face the end of life. Readings in Rahner, Tolstoy, Jung. Three credit hours.

INTERMEDIATE

RELIGIOUS STUDIES 111 — The Common Sense Bible — (seminar). Being a somewhat “existential” approach to the common sense substratum that permeates the Bible, the course will focus on the so-called “Wisdom Literature” and other sundry practical and profane expressions which are generally overlooked in fascination with the overtly religious materials. Three credit hours.

RELIGIOUS STUDIES 112 — Synoptic Theology — (seminar). An in-depth study of how the theological preoccupations of Matthew, Mark, and Luke are reflected in their varying presentations of the Christian kerygma and the oral tradition. Also a consideration of the relationship of the Synoptic Theologies to the basic Pauline Theology with a view to indicating that Pauline Theology was not a novelty. Prerequisite: Intro. in NT. Three credit hours.

RELIGIOUS STUDIES 113 — Whatever Became of the Prophets? — Prophecy as a religious and sociological phenomenon is the general concern of the course; its expression in ancient Israel and the unifying force and variety of expressions therein provide the central core of study. Three credit hours.

RELIGIOUS STUDIES 114 — Jewish Rebels and Nonconformists at the Time of Jesus — A study of sectarian Judaism of the First Centuries BC and AD. The focus will be on dissenting expressions from the developing “Normative Judaism” as they are reflected in pseudopigraphic writings, histories of the period, and in the Dead Sea Scrolls. The range from apocalypticism to guerilla activism will be explored. Three credit hours.

RELIGIOUS STUDIES 115 — Israel and Canaan: Cultural Polarities in Conflict and Confluence — (seminar). The rich literary heritage of Canaan — myth, epic, poetry and song — expressing a culture for whom ecology was religion and fertility an obsession is examined alongside traditional Israelite values and perspectives. The Bible is then asked how it all really came out. Three credit hours.

RELIGIOUS STUDIES 116 — Prophets and Wisdom Literature — (seminar). A seminar devoted to the study of Wisdom Literature and to Israelite Prophecy in its relationship to Israel’s Messianic hopes, her attitudes towards the monarchy, the vocation of Israel and the Covenant. Prerequisite: Intro. in OT. Three credit hours.

RELIGIOUS STUDIES 120 — The Gospel of Mark and the Synoptic Tradition — (seminar). The literary structure and theological emphases of Mark's gospel and its place in the synoptic tradition. Prerequisite: Intro. in NT. Three credit hours.


RELIGIOUS STUDIES 123 — Jesus: Man and Myth — (seminar). A seminar on the life and teachings of Jesus of Nazareth in his historical setting (the so-called "quest for the historical Jesus"), the use of the gospels as historical sources and as books of faith, interpretations of Jesus in the Early Church, and consideration of modern attempts to redefine the significance of Jesus for today. Three credit hours.

RELIGIOUS STUDIES 124— Social Issues in Early Christianity — (seminar). A seminar on selected topics of ethical and social issues in the Early Church such as marriage and the home, slavery, the role of women, the state, war and death. Three credit hours.

RELIGIOUS STUDIES 125 — Hellenistic Religion — (seminar). A seminar on selected topics of Hellenistic religion (ruler cult, mystery religions, civic cults, Gnosticism, magic, astrology, etc.). Consult with the professor for details of topics to be covered. Open to English readers. Three credit hours.

RELIGIOUS STUDIES 133 — American Religious Thought — A study of representative thinkers from the major American religious communities and movements, including Puritans, Unitarians, Transcendentalists, Revivalists, Liberals, Fundamentalists, Social Gospellers, Neo-Orthodox theologians, Catholics, Jews and blacks, as well as their intellectual critics. Three credit hours.

RELIGIOUS STUDIES 135 — Patterns of Belief and Action in Christian History — Why have people who call themselves Christian behaved so differently from each other? A study of the correlation between symbolic and social action in apocalyptic, monastic, adaptionist, conversionist, militaristic and mystical movements with Christianity. Three credit hours.

RELIGIOUS STUDIES 136 — Faith and Reform in Classical Protestantism — A study of the protestant movement of the 16th and early 17th centuries with attention to the renewal of religious fervor and its effects on politics and culture. Source readings in Lutheran, Calvinist and radical reformation thought. Three credit hours.

RELIGIOUS STUDIES 138 — Enlightenment, Revival and Secularization in Modern Protestantism — A study of protestant life and thought in the age of reason and revolution (18th, 19th, and early 20th centuries) with attention to the problem of maintenance and growth of an authentic Christian community. Readings will include selections from pietist, rationalist, romantic and radical religious thought. Three credit hours.
RELIGIOUS STUDIES 141 — Religious Ethics, Politics and Society — An exploration of the confrontation of religious-moral values and societal practices. Particular social issues such as political leadership, war, civil disobedience, economic distribution, international activity will be analyzed in light of the Christian tradition. Three credit hours.

RELIGIOUS STUDIES 142 — Biblical Ethics — A study of the ethical principles developed in the Judaean-Christian tradition. Attention will also be focused on contemporary parallels to the biblical scene. Three credit hours.

RELIGIOUS STUDIES 143 — Supreme Court and Religion — (seminar). Case studies of the Supreme Court's involvement with various religious issues which will seek to develop an understanding of the historical and judicial uses of the establishment and free exercise clauses of the Constitution. Critique of various current issues: religion and the public schools, taxation of church property, limits on religious liberty. Three credit hours.

RELIGIOUS STUDIES 146 — Corporate Responsibility — Christian reflection upon the ethical dimensions of modern business practices. Case studies will focus on such issues as investment practices, political involvement of multinational corporations, economic distribution, advertising policy and consumerism. Three credit hours.

RELIGIOUS STUDIES 151 — Christ in the Thought of Teilhard de Chardin — (seminar). Tracing the primacy of the "Humanism" in the writings of Teilhard. Man's ultimate importance, both from the standpoint of evolution (cosmogenesis) and the Incarnation (Christogenesis). Growing psychosocial awareness, process of amorization (love energy), in mankind or "evolution made conscious of itself". Contemporary applications. Presentations of papers and discussions by members of seminar. Three credit hours.

RELIGIOUS STUDIES 156 — God Perhaps? — (seminar). A consideration of the problem of God for the contemporary man. What foundation in contemporary experience is there for talk about God? What is the relation of the way one thinks about God to the possibility of his existence? An exploration of the static vs. dynamic, the personal vs. the impersonal notions of God. Readings in Feuerbach, Camus, Gilkey, Hartshorne. Three credit hours.

RELIGIOUS STUDIES 157 — Contemporary Roman Catholic Thought. — A survey of some of the major contemporary Roman Catholic theologians such as Rahner, Kung, Baum, Schillebeeckx and Lonergan. Three credit hours.

RELIGIOUS STUDIES 161 — Great Essays in Christian Criticism — (seminar). Where is the focus of religious meaning in literature? What is the relation between poetry and belief? Is a Christian tragedy possible? These and many more issues will be studied in relation to certain great essays in Christian Literary Criticism. Three credit hours.

RELIGIOUS STUDIES 163 — Religion and Poverty I — (seminar). A study of the age-old problems of hunger, disease, illiteracy and poverty in Africa, South America and Asia, and proposals for the relief and reform of the problems of poverty being offered by the World Council of Churches and the Catholic Church. Three credit hours.

RELIGIOUS STUDIES 164 — Religion and Poverty II (seminar). The problems of poverty in the United States — our ghettos and Appalachias — and proposals for
reform from the Christian point of view. Three credit hours.

RELIGIOUS STUDIES 166 — Christian Social Reforms I — (seminar). A study of
the interplay of the French and Industrial Revolutions, economic liberalism, socialism
and communism, Catholic social pioneers, the Kulturkampf, and the Risorgimento in
shaping Catholic social reforms culminating in the Rerum Novarum of Pope Leo
XIII. Three credit hours.

RELIGIOUS STUDIES 167 — Christian Social Reforms II — (seminar). The social
encyclicals of Popes Pius XI and XII, John XXIII, and Paul VI; the social teachings
of Vatican II. The Church's position on current social questions. Three credit hours.

RELIGIOUS STUDIES 168 — Faith and Doubt — (seminar). An exploration of the
schizoid situation in which most modern believers find themselves. The dynamic
nature of faith and its relation to doubt will be considered with the help of Paul Tillich
and Michael Novak. Three credit hours.

RELIGIOUS STUDIES 169 — Myth, Symbol and Religious Language —
(seminar). A consideration of the problem of the meaning and nature of religious
language. An attempt to understand religious language as symbolic language as well
as the social origins and functions of symbol and myth. Readings in Eliade, Ricoeur,
Cassirer, Langer, Berger and Luckmann. Three credit hours.

RELIGIOUS STUDIES 174 — Christianity and Tragedy — (seminar). A study of
the points of contact and conflict between the tragic vision and the Christian faith.
The question as to whether there can be such a thing as a Christian tragedy will be ex-
amined from both a religious and a literary point of view. Three credit hours.

RELIGIOUS STUDIES 175 — Theology of Liberation — The "theology of
liberation" arises out of a deep compassion and critical reflection on the situation of
the poor and the oppressed, and building on the Marxian analysis of alienation in
modern society, shows that the consequent demand for liberation is one which
Christianity is almost uniquely equipped to meet. Three credit hours.

RELIGIOUS STUDIES 176 — Christology — (seminar). This seminar in biblical
theology will be a detailed study of the person and teaching of Jesus inssofar as they
can be reconstructed from the New Testament. Three credit hours.

RELIGIOUS STUDIES 178 — Mysticism East and West — (seminar). A
comparative analysis of the foundations, methodology, and nature of the mystical ex-
erience as seen in the Judaeo-Christian and Asian (Hindu, Zen Buddhist, and
Islamic) traditions. Prerequisite: Consent of instructor. Three credit hours.

RELIGIOUS STUDIES 181 — Hindu-Muslim Mysticism — (seminar). Readings
in the sources of the mystical traditions of Hinduism and Islam including scriptural
sources (Upanishads, Bhagavad Gita, etc.) as well as the writings of Kabir, Caitanya,
Ramakrishna, Junayd of Baghdad, al-Ghazzali, ibn al Arabi, and Rumi. Three credit
hours.

RELIGIOUS STUDIES 183 — Contemporary Hindu Thought — (seminar). A
study of the Hindu tradition in the 20th century and its socio-political expression,
Gandhi; its religio-philosophical expression, Sri Aurobindo; and its literary expres-
sion, Rabindranath Tagore. Three credit hours.

RELIGIOUS STUDIES 185 — Hinduism — (seminar). Readings from the source
materials of classical Hinduism (Vedic Hymns, selected Upanishads, Bhagavad Gita
and others) as well as those of the modern period — Gandhi and Sri Aurobindo. Three
credit hours.
RELIGIOUS STUDIES 187 — Islamic Modernism — Islam and the challenge of modernity in the Middle East (Egypt) and the Indian subcontinent (Pakistan) as witnessed in the traditional and modern Muslim responses to political (pan-Islamism, nationalism, socialism) and social (the changing family, women’s rights, etc.) change. Three credit hours.

ADVANCED

RELIGIOUS STUDIES 211 — Idea of Reform — (seminar). Is the idea of reform a necessary concept for Christian theology? Under what historical conditions has it appeared to be so? How does it differ from other ideas of renewal? Prerequisite: Consent of instructor. Three credit hours.


RELIGIOUS STUDIES 215 — Patristic Seminar — A seminar on selected topics in the Early Church of the Patristic period. Consult with the professor for details of topics to be covered. Open to English readers. Prerequisite: Introduction in New Testament or Early Church or consent of instructor. Three credit hours.

RELIGIOUS STUDIES 216 — Theology of Marriage — (seminar). A study of the biblical, historical, and contemporary views of marriage in Roman Catholic theology, with application to modern cultural and psychological dimensions of human relationships. Treatment is also accorded to modern challenges to the viability of monogamy and of permanent commitment. Prerequisite: Contemporary Christian Morality or consent of instructor. Three credit hours.

RELIGIOUS STUDIES 218 — Theology of Paul Tillich — (seminar). An in-depth study of the systematic theology of the contemporary theologian who has perhaps done most to bridge the gap between modern man and Christianity. Reading, discussion and research paper. Prerequisite: Consent of instructor. Three credit hours.

RELIGIOUS STUDIES 221. — Authority in Christian Community — (seminar). A consideration of the crisis in authority in the church in terms of the paradigm analysis of T.S. Kuhn and from the point of view of the sociology of knowledge. What have been the underlying presuppositions of the nature and function of authority in the community and what are the current alternatives? Readings in Kuhn, Berger and Luckmann, Kung, Baum and Rahner. Three credit hours.

RELIGIOUS STUDIES 223 — Man, The Creator: Biblical Perspectives on Ecology and Ethics. — This course traces the theme of man’s responsibility vis-a-vis his natural and social environment (i.e., “creature” to “creation”) throughout its various modes of expression in the Bible. It attempts to hold both a scientific and a humanistic stance toward analyzing the problems inherent in living in the world, as the biblical writers stated it. Three credit hours.

RELIGIOUS STUDIES 226 — Hemingway and His Christian Critics — (seminar). What is at the moral and religious center of Hemingway’s vision or world? Radical skepticism? Neo-Stoicism? Or an implicitly Christian kind of faith? This issue and many others will be discussed in terms of his major works — the early stories,
Farewell to Arms, The Sun Also Rises, For Whom the Bell Tolls, and The Old Man and the Sea. Three credit hours.


RELIGIOUS STUDIES 233 — Life and Death Issues — (seminar). A study of issues concretely relating to the qualitative human dimensions of personal and social living, together with an evaluation of current theological theories of death and the right to die humanly. Questions pertinent to the substance of medical ethics are included but are not comprehensive of course content. Prerequisite: Contemporary Christian Morality or consent of instructor. Three credit hours.

RELIGIOUS STUDIES 241 — God in Process — A study of the logic of Classical Theology in categorizing the attributes of God — especially all-perfect, immutable, omniscient — as criticized (and corrected?) by the Neo-classical Theology of Charles Hartshorne ... a critique of divine impassibility. Is God in any way Self-surpassing or in process? Is the Incarnation a symbol only, or, in some way a proof of God's passivity? Three credit hours.

RELIGIOUS STUDIES 246 — Before Adam: The Archaeology and Mythology of Prehistory — (seminar). The seminar attempts to get inside the world of ancient man via two diverse media: the science of archaeology and the literature of myth, particularly as they are demonstrated in the Ancient Near Eastern milieu. Finally, some biblical statements will be examined in light of conclusions derived from the dual methodology to see if fuller meaning emerges. Three credit hours.

RELIGIOUS STUDIES 251 — Weimar Theology — (seminar). A study of the theology written in the period of the Weimar Republic in Germany, with attention to the relationship between cultural crisis and theological renewal. Readings include selections from Troeltsch, Harnack, Barth, Gogarten, Bultmann, Otto, Buber and Adam. Prerequisite: Consent of instructor. Three credit hours.

RELIGIOUS STUDIES 256 — American Revivalism — (seminar). Is the religious revival characteristically American? How important is it for the maintenance and improvement of American culture? A study of the sources of the revival in early American experience, its frontier and urban variants, and its more recent applications in mass society. Prerequisite: Consent of instructor. Three credit hours.

RELIGIOUS STUDIES 261 — Motives of Christians at War — (seminar). A study of the psychological, sociological and religious foundations of Christian participation in war, with attention to the phenomenon of martyrdom, the crusade, the holy war, revolution and patriotic sacrifice. Research in theological and biographical resources. Prerequisite: Consent of instructor. Three credit hours.

RELIGIOUS STUDIES 311 — Tutorial.

RELIGIOUS STUDIES 411 — Research Project.
The program for majors in sociology is designed to provide a critical understanding of the elements of theory and methodology, knowledge of the social institutions and processes characteristic of society, and an examination of social problems and stresses which afflict society. The curriculum is broadly conceived to serve majors with diverse educational and career interests, ranging from graduate studies in sociology, social work and urban affairs to careers in business, government, medicine and law. Offerings include both seminar and field research courses, and the department maintains a laboratory-workshop in conjunction with its field work operations. Ten semester courses constitute the major. All majors are required to take the general course (Sociology 51) and one theory course (Sociology 141 or 142). Majors planning graduate studies in sociology, social work or allied disciplines must also take both research methods (Sociology 123) and social statistics (Sociology 124); all other majors must take either Sociology 123 or 124. The remainder of each major's program will be arranged in consultation with his departmental advisor. Sociology 51 is a prerequisite for all courses except Cultural Anthropology (Sociology 71) and may be taken in either the freshman or sophomore year. 100-level courses may be elected by any student who has had Sociology 51. 200-level courses are reserved for junior and senior majors except by permission of the instructor.

SOCIOLOGY 51 — Introduction to Sociology — An introduction to the discipline of sociology, its theory and research, with special emphasis on contemporary America. Three credit hours.

SOCIOLOGY 71 — Cultural Anthropology — An introductory survey of the field. Comparative analysis of social organizations. Applied anthropology. Three credit hours.


SOCIOLOGY 111 — Social Problems — A consideration of social problems in modern society, such as crime, poverty, militarism, and alienation. Two perspectives will be used to analyze all problems. One is business and industry, the second is government and law. Three credit hours.
SOCIOLOGY 115 — Racial and Ethnic Relations — Comparative analysis of selected minority groups within a systematic cross-cultural framework of dominant-minority relations. Special emphasis will be given to the concepts of race and ethnicity in contemporary America. Three credit hours. (Not offered 1973-74).

SOCIOLOGY 117 — Criminology — Description and analysis of theories of crime causation, the modes of societal responses to crime, the relationships between crime and patterns of legitimate society, and the specific problems encountered in correctional programs. Three credit hours.

SOCIOLOGY 123 — Methods of Social Research — Introduction to the application of the scientific method to the analysis of social phenomena. Review of methodological orientation in sociology; emphasis on formal steps in research design, including definition of problem, hypothesis construction, development of instruments of observation, collecting and processing data for computer analysis, and interpretation of data. Opportunities for field research. Three credit hours.

SOCIOLOGY 124 — Social Statistics — A survey of the basic statistical concepts used in the analysis of sociological data. Both descriptive and inductive statistical techniques are studied. Special emphasis will be given to the problem of statistical inference, probability theory, multiple regression, and the application of certain statistical tests such as a chi-square. A brief introduction to selected advanced topics will also be offered. Three credit hours.

SOCIOLOGY 135 — Urban Sociology — Introduction to the study of urban institutions and urban social relations. Analysis of ecological, institutional and social-psychological elements in urbanization and urban societal organization. Three credit hours.

SOCIOLOGY 141 — Development of Social Theory — A descriptive and critical study of the development of sociological theory from Comte to the present. Principal attention is given to the works of Durkheim, Max Weber, and Simmel. Three credit hours.

SOCIOLOGY 142 — Contemporary Sociological Theory — An elaboration of a frame of reference for the analysis of social systems in terms of contemporary theory. Three credit hours.

SOCIOLOGY 145 — Class Conflict and Social Change — The dichotomous and the integrationist models of society considered in relation to the explanation of social change in industrial society. Three credit hours.

SOCIOLOGY 155 — Social Psychology — This course aims to acquaint students with the role of social and cultural factors in the behavior of individuals. Included will be such topics as: attitude development and change, prejudice, language and communication, small group processes, the relationships of culture and personality, and interpersonal perception. Three credit hours.

SOCIOLOGY 157 — Group and Organizational Behavior — A survey of small groups, with special emphasis on organizational settings. Included will be the internal dynamics of groups, as well as their interaction with other units (departments, organizations, clientele, etc.). Attention will be given to group development, role structure, and conflict. Part of class will be devoted to experienced-based learning. Three credit hours.

SOCIOLOGY 161 — Sociology of Religion — Functional and phenomenological approaches to the Sociology of Religion. Religious experience, its institutionalization,
and the consequent dilemmas. Religion in contemporary American society. Three credit hours.

SOCIOLOGY 164 — Political Sociology — Examination of major theorists and of sociological research on political processes. Emphasis will be on community and national power systems including the roles of parties, bureaucracies and the populace. Three credit hours.

SOCIOLOGY 166 — The Family — The family as a social system, functionally and historically, with special reference to American urban life. Family process culture, and personality development. The family and related social systems. Three credit hours. (Not offered 1973-74).

SOCIOLOGY 170 — Social Change — An overview of the major theories and studies of change and development in society and community with respect to the sources, direction, the rate and degree, agents, and planning of change in modern industrial and emerging nations. Relevant theories and research in disciplines related to sociology will be examined in depth. Three credit hours. (Not offered 1973-74).

SOCIOLOGY 206 — Population — Issues and problems of population change; overpopulation; zero population growth. Population growth, composition and distribution as experienced around the world. Trends in fertility and mortality; migration; population theory; and population policy. Three credit hours.

SOCIOLOGY 215 — Sociology and Law — Focuses on the relationship between legal systems of diverse societies in terms of substantive laws, procedural prescriptions, and legal ideologies. Current historical and anthropological materials are utilized to demonstrate the range of characteristics and modes of divergence between various legal systems. Three credit hours. (Not offered 1973-74).

SOCIOLOGY 237 — Special Topics in Urban Sociology — Special Topics in sociological theory and research on urban social systems, urbanization and processes of urban change. Prerequisite: Sociology 135. Three credit hours.

SOCIOLOGY 246 — Social Stratification — Comparative study of the unequal distribution of privilege, prestige and power. The changing class structure and patterns of social mobility. The relationship of social stratification to bureaucracy and mass in modern society. Three credit hours.

SOCIOLOGY 263 — Medical Sociology — Focuses on the institution of modern medicine with emphasis on the social epidemiology of disease, the organization of medical care, and the social roles of those responsible for this care. This includes analysis of the problems of defining illness, the processes of seeking treatment, and the role of the sick person. Major trends are analyzed and cross-cultural comparisons are made. Three credit hours.

SOCIOLOGY 267 — Industrial Sociology — Development of industrialization. Study of complex organization centered about men at work. Bureaucracy examined both within the firm and as a thematic factor in modern life. The work setting including managerial structure and control, worker response, unionization, and communication. Social-political-economic change and the future of industrialism. (Field Trip) Three credit hours.

SOCIOLOGY 268 — Bureaucracy — Formal organizations and their informal dynamics. Bureaucracy in contemporary industrial, political, and military systems. Three credit hours. (Not offered 1973-74).
SOCIOLOGY 298, 299 — Special Projects — Program of seminars, directed readings and supervised independent study open to selected junior and senior majors. Offerings will vary from year to year. Ordinarily projects will be approved for one semester; in special instances approval may be given for a full year project. *Three or six credit hours.*
DIVISION OF

Theatre Art

Associate Professor: Herson (Director)
Assistant Professor: Ilko
Instructor: Becker

The Division teaches the art of theatre as one of the symbolic languages of a liberally educated person. A core of basic courses in acting, directing, and design is open to all students, and is designed both for the student who desires simply to broaden his education with a course or two and for the student who wants to lay the foundation for further study of theatre art. Sequences of intermediate and advanced courses are offered in acting, directing, and design; but the Division does not offer a major. Registration in any course in the Division may be made only by permission of the instructor of the course and of the Director of the Division.

Fenwick Theatre, a recently constructed and fully-equipped thrust-stage theatre, houses annually the four-play season of the Division of Theatre Art. The season serves several purposes. It is a laboratory where students of the Division may learn the arts and skills of the theatre. It is a showcase where students of the Division, after they have developed sufficiently through their course work, may practice their art for a discerning public. It provides students and residents of the Worcester area with theatrical productions of high quality. Two of the four major productions are directed by faculty and two by advanced directing students under faculty supervision. In addition, acting and directing students present a large number of studio productions as part of their course work. Work on the Division's productions, on stage, back stage, or front of house, is open to all Holy Cross students. Special seminars are offered to introduce freshmen to the intricacies of theatrical production; freshmen enrolled in the seminars produce plays as part of the course work and see about twenty plays in various New England theatres.

THEATRE ART 91 — Design 1 — Basic — An introduction to the problems of self-expression in stage design especially in the translation of ideas into visual terms. Includes sketching, basic drafting, and an investigation of two- and three-dimensional space as the means for understanding the visual concepts in stage design.

THEATRE ART 92 — Design 2 — Basic — An introduction to the media, techniques, and procedures for dealing with the translation of dramatic conceptions into tangible and practical design. Includes a basic understanding of sketching, rendering, models, and the drafting of floor plans, elevations, and sectional views as tools for turning imagination into reality. Prerequisite: Design 1.
THEATRE ART 93 — Technical Theatre 1 — Basic — A basic introduction to the techniques of theatre architecture, technical drafting, mechanics, construction, hardware, and lighting. The two primary goals are the technical understanding of space and the ability to solve, with the means available, the practical problems which arise in the realization of a play on stage.

THEATRE ART 95 — Acting I — Basic — Study and practice of the basic techniques of producing good voice and speech, relaxation, breath control, phonation, resonance and proper formation of the sounds of English and correction of regional accents. Work on improvisatory techniques and elementary work in interpretation are also studied.

THEATRE ART 96 — Acting 2 — Basic — Development of the techniques learned in Acting 1. Intensive study and work on scenes for class presentation. Pre-requisite: Acting 1.


THEATRE ART 192 — Design 3 — Techniques — A further study of the graphic means of expressing stage design conceptions. Also includes a basic analysis of the historical and stylistic approaches that are available to the contemporary designer in dealing with all plays. Pre-requisites: Technical Theatre 1. Design 2, Acting 1.

THEATRE ART 193 — Technical Theatre 2 — Intermediate — A continuation in detail of the investigation into one of the many technical fields, offering a more complete understanding and familiarity with, for example, lighting, mechanics, or special problems in construction. Pre-requisite: Technical Theatre 1

THEATRE ART 195 — Acting 3 — Styles — Analysis and interpretation of plays from various periods of theatre history. Investigation of the style of performance as it was and as it can be communicated to contemporary audiences. Pre-requisite: Acting 2. Pre-requisite or co-requisite: Technical Theatre 1.


THEATRE ART 198 — Directing 2 — Scenes — Communication of the theatrical image to actors and designers, and through them to the audience. Long scenes and one-acts. Pre-requisite: Directing 1.

THEATRE ART 280 — American Musical Theatre — A study of the American Musical from 1900 to the present. The development of the book musical and the revue, and an analysis of the musical form will be studied.

THEATRE ART 291 — Design 4 — Techniques — The detailed study of several plays' scenic (or costume) requirements and the completion of the design procedures necessary to fulfill them. Course work will be coupled with practical design assignments for plays produced in the theatre whenever possible. Pre- or co-requisite: Technical Theatre 1. Pre-requisite: Design 2.

THEATRE ART 295 — Acting 5 — Scene Study — Laboratory: Performance — Pre-requisite: Acting 4. Pre-requisite or co-requisite: Design 1.

THEATRE ART 296 — Acting 6 — Scene Study — Continuation of Acting 5. Pre-requisite: Acting 4 or Acting 5.

THEATRE ART 298 — Directing 4 — The Full-Length Play — Complete production of the full-length play. Pre-requisite: Directing 3; permission of instructor and Director of Division.

THEATRE ART 299 — Theatre Tutorial — Directed study in selected theatre topics. May be taken a maximum of three times, with different topics each time. Pre-requisite: permission of instructor and of the Director of the Division.
The Office of Special Studies

Director: Lenore R. O'Boyle
Associate Director: Randall K. Burkett
Associate Director: Paul R. Dommel

Special Studies Programs

The Office of Special Studies is responsible for the following programs: Freshman Honors Seminars, The General Honors Program, the Center for Experimental Studies and The Fenwick Scholar Program.

I. Freshman Honors Seminars

Seminars of approximately ten students each are offered yearly by several departments. These seminars take the place of freshman courses in the areas concerned and are best suited to students whose high school work has been on an advanced or honors level. There are no specific prerequisites. Information about the seminars and directions for submitting applications are sent to all freshmen during the summer. Students are free to apply for any number of seminars. In 1972-1973, twenty-two seminars were offered.

II. General Honors Program

Inaugurated in the fall of 1973, the General Honors Program is open to highly qualified students at the end of the sophomore year. The program is designed for a limited number of students who wish to combine advanced work in their major with serious intellectual interests of a broader range. Plan: Students participating in the Honors Program shall design individual plans of study in consultation with the Director of the General Honors Program. Each plan shall include the following components:

1. Three Honors Seminars. These shall be taken outside the major department in the junior and senior years. At least two of the seminars must be drawn from a division of the curriculum (Science, Social Science, Humanities) which does not include the major field. Honors seminars shall have a maximum of eight students. Emphases will be upon independent research, papers, and oral presentation.

2. A Senior Honors Thesis. It is expected that students will devote one quarter of their time during two semesters to a Directed Research Project in their major. The project may begin in the spring term of the Junior year. The thesis shall be read by two faculty members in addition to the Directed Research Tutor and shall be defended by the student in an oral examination.

Selection Criteria: Students will write an essay describing themselves,
their qualities for honors work (participation in a Freshman Honors Seminar, facility in modern languages for research purposes, other special skills), their past academic careers, their proposed plan of studies.

Except in special cases, students shall have achieved a cumulative Q.P.I. of 3.5 for the combined freshman and sophomore years (subsequently, students will need to maintain a 3.3 in order to remain in the program.). Applications should be submitted to the Director of the General Honors Program by March 1st (sophomore year). New and continuing seminar offerings will be listed each year.

III. Fenwick Scholar Program

The Fenwick Scholar Program, first offered in 1966, is open to seniors upon nomination by their departments. From those nominated, one candidate is selected by the Committee on Special Studies to bear the College's highest honorary designation. As a Fenwick Scholar, the student is free to design, with his advisor, the academic program which he believes will complete his undergraduate education in the most profitable way. Scholars are free to take courses or not, to do independent study, or to undertake a combination of courses and independent study. In choosing the scholar, the Committee on Special Studies seeks a student who will put this unusual opportunity to best use. At the end of the senior year the Fenwick Scholar usually makes a public presentation of a major piece of work, a scholarly essay, a group of experiments or a demonstration of substantial accomplishment in the creative arts. Application deadline: March 1 (junior year).

IV. Center For Experimental Studies

Established in the spring of 1971, the Center for Experimental Studies is charged with developing a variety of non-traditional approaches to education that will encourage the intellectual development and broaden the experience of Holy Cross students. To achieve this the Center has designed programs ranging from one-course academic internships to an integrated interdisciplinary major. The Center staff is continuously seeking to create new opportunities for students. Programs are not open to freshmen and the extent of participation, except in special cases, is limited to the equivalent of one course per term.

The Programs

1. Academic Internships (Local) — Off-campus fieldwork provides an alternative to traditional instruction and a chance for students to demonstrate imagination and resourcefulness. Internships offer opportunities for educational growth, for the development of special skills, the assessment of personal commitments, and the exploration of potential careers. There are a variety of internships available in areas such as health and education; law and business; economic development; the care of retard-
ed and disturbed children; state and local government; scientific research; cultural enrichment. Students may design their own projects.

Applications are due in early December and mid-April, as announced. Lists of available positions will be published twice a year.

2. Academic Internships (Away and Full-Semester) — For advanced students, special off-campus internships are available in Washington, D.C., New York, and other major cities. These are full-semester projects that offer qualified students an intensive program combining “on the job” experience with academic research. Applicants must be well advanced in their major studies to profit from the internship, and be willing to put in the extra effort required for a fruitful blending of the practical and the academic. Internships have been available in Congressional offices, national urban organizations, and national Catholic action agencies.

Applications are due in early December and mid-April, as announced. Lists of available positions will be published twice a year.

3. Multidisciplinary Majors — The Center may authorize and supervise student-designed programs that combine studies from more than one academic department. These programs may focus on area studies, or cross-disciplinary topics. (Programs in “general education” will not be considered since the rationale of general education is different from that of the major.) The following comparative guidelines are offered as an aid to students in preparing program proposals:

(i) Conceptualizing the major is the chief task of the student. This requires more than the bringing together of courses related to a particular topic. Plans should define a systematic body of knowledge and demonstrate a logical progression of study from basic concepts and ideas to general theories and methods of analysis. Thus movement through the major should involve the acquisition of greater depth and capacity for analysis.

(ii) No plan will be accepted that can be implemented by other means such as a double major or a regular major with related electives. The design should involve at least two disciplines and fall within the competence of the College faculty.

Application Procedures:

(i) The student should present a written Proposal for the Major no later than the beginning of the junior year. This proposal must include a statement of intellectual rationale, an outline of courses already taken, and a plan of proposed courses.

(ii) The proposal should be written in consultation with the Director of Special Studies, and two faculty members based in departments related to the major. The student should secure letters of support from those faculty members who have been consulted on the plan and are willing to serve as program advisors.

(iii) Upon the unanimous recommendation of the advisors, the proposal
will be considered by the Committee on Special Studies. The student may be asked to appear before the committee to answer questions about the plan.

(iv) Once the plan is approved, the faculty sponsors and Director will serve as a permanent advisory committee responsible for all changes in the major plan as well as unrelated courses.

4. Interdisciplinary Courses — Each year The Center sponsors a number of interdisciplinary and experimental “courses.” These are primarily small seminar-discussion groups open to upperclassmen. The courses are meant to test nontraditional methods of teaching, to explore new ways of defining and organizing subject matter; to respond to the special interests of students and to introduce new areas of study into the curriculum. Seminars offered in 1971-1973: War and the Christian Conscience; Legal Reasoning; the Urban Dilemma; Topics in Penology; the Novel in 18th Century France and England; Man and His Environment; the Language of Visual Art; Methods of Public Policy Analysis. New course listings are published twice a year. Applications are required.

5. Exchange Program — Students may study for a semester or a year at selected institutions in Canada, or apply for special programs of limited duration at other colleges or universities when these programs are directly related to the student’s major.
Special Programs

For Students Interested In The Health Professions

For many years Holy Cross has maintained an excellent record in its successful preparation of students for entrance to medical, dental, and other health professional schools. In order to continue this record, Holy Cross now offers what it believes is a most effective program to prepare for careers in the health professions. A student may select any one of the 16 majors offered with the exception of economics-accounting and at the same time meet all requirements for admission to medical or dental school. If the applicant is offered admission to the Premedical/Predental Program, the College will see to it that the proper science requirements are fulfilled as part of the regular course of studies. It is not necessary to select a science major. In fact, a major should be selected on the basis of the student's sincere interest and qualifications rather than on the basis of trying to impress a health professional school. In recent years, as many as one-half of the students accepted into medical or dental schools from Holy Cross have majored in a non-science related field.

Many medical and dental schools recommend that students have completed one year of college mathematics. Such a course is REQUIRED for the following majors: biology, chemistry, economics, economics-accounting, mathematics, physics, psychology. It is recommended to all philosophy majors.

Holy Cross accepts only a limited number of students into the Premedical/Predental Program for several reasons. It is, first of all, impossible for Holy Cross to accommodate all the students who would like to take the science courses required for medical or dental school. Second, and possible more important, is the fact that Holy Cross does not wish the majority of the Freshman class to be made up of students who have the same educational and professional goal. This is undesirable from a philosophical point of view and from an educational point of view since it severely limits the backgrounds, the goals, and the perspectives of our entering class.

Further information may be obtained from the Faculty Advisor for Premedical/Predental Students, Fenwick 228.

For Students Interested In Law

In keeping with the general practice of most liberal arts colleges, there is no formal and explicit prelaw program at Holy Cross. A combination of a broad liberal arts background and in-depth study in one of the traditional major fields is regarded as the best preparation for future legal study. In particular, the prospective law student is recommended to develop experience and skills in the following areas: 1) effectiveness in the comprehension and
use of language, 2) understanding of human institutions and values, and 3) creative power in thinking and reasoning. These qualities are developed and inculcated in the various branches of the present undergraduate curriculum.

The Office of Advisor for Graduate Studies keeps on hand current legal statistics and catalogs from the various law schools, arranges interviews with deans and admissions officers, sets up forums and discussions with local lawyers or faculty of law schools and gives advice in the choice of law schools suited to the individual's qualifications and achievements. There is also an undergraduate prelegal society called the St. Thomas More Prelegal Society.

Further information may be obtained from the Faculty Advisor for Graduate Studies, O'Kane 456.

**For Students Interested In Teaching**

Students who plan to become teachers in secondary schools where they must satisfy state certification requirements may take courses listed on page 52, which provide an introduction to professional education. Additional information on teaching certification requirements may be obtained from Professor Joseph H. Maguire.

The College offers no major in Education. A full description of the teacher preparation at Holy Cross is available in Professor Maguire's office, Fenwick 226.

**Graduate Studies Office**

Most students now continue their studies beyond college. Professional studies in law, medicine and dentistry, all the varied areas of academic graduate study, programs in business administration, education and newer fields like urban affairs attract more students each year. The Graduate Studies Office exists to acquaint our students with these innumerable opportunities, to help them make intelligent choices in their educational plans and to aid them in their search for university admission and scholarship aid.

In O'Kane 458 a special library has been assembled to provide complete information about graduate and professional studies. Catalogs of all American graduate programs and many foreign institutes may be read therein private. A large selection of excellent guides to post-baccalaureate study is available.

The Advisor for Graduate Studies welcomes students to visit him individually when they are formulating their study plans. Moreover, all nominations for national competitive fellowships — the Rhodes Scholarship, the Danforth National Fellowship, the Woodrow Wilson Foundation Fellowship, the Marshall Scholarship, and the Fulbright Awards —
are made through his office. The College has an excellent record of placing its graduates and aiding them achieve distinction and awards in fellowship competitions. More than 60 per cent of recent classes began some form of graduate or professional study immediately after college, while an additional 10 per cent or more returned to some form of graduate or professional study after fulfilling military or other obligations. In recent years Holy Cross graduates have included more than thirty Woodrow Wilson Fellows as well as numerous Danforth, Fulbright, Marshall, Root-Tilden and National Defense Fellows. Since 1966, the College has had three recipients of Rhodes Scholarships.

**Junior Year Abroad**

A limited number of students who give promise in their first two years that they will make good use of the advantages of study in another culture may be approved for the Junior Year Abroad Program. Applicants must have the approval of the Faculty Committee on the Junior Year Abroad, and present a proposed plan of study acceptable to the major advisor and the Dean. Approval is currently granted for study at a number of European universities. The College is an affiliate of the Institute of European Studies.

Participation in this program is normally limited to students with B averages (Q.P.I. of 3.000 or better) for their first two years. If students intend to take courses abroad in a language other than English, they must complete two years of courses in that language at Holy Cross before going abroad. At their interviews by the Junior Year Abroad Committee, students should expect to be questioned in the language appropriate to their study center and to demonstrate to the committee a reasonable competence in understanding and speaking that language.

The presence on a student's transcript of courses concerned with the history, literature, fine arts, and philosophical contributions of the country or area where they intend to study will be a positive point in securing committee approval for study abroad.

Ordinary participation in the Junior Year Abroad Program begins with the fall semester, and lasts for one full academic year. Students in the program are considered fully enrolled students of the College of the Holy Cross during that year. Credits and quality points earned in the program are included in all calculations of academic averages, including those which determine semester or commencement honors.

The Institute of European Studies, a non-profit educational institution, maintains centers in London and Durham, England; Freiburg, Germany; Madrid, Spain; Paris and Nantes, France; and Vienna, Austria. Students may take courses at the Institute Centers and at the European Universities to which the centers are related. Holy Cross considers these centers abroad as extensions of its own campus and grants its students academic credit for
the work done there. Instruction in Vienna, London, and Durham is in English, at the other centers in the language of the country. Supervised field study trips are an integral part of the I.E.S. programs. Comprehensive fees for I.E.S. programs are comparable to those of Holy Cross. Limited financial aids are awarded by the Institute.

In association with the London School of Economics, the Institute of European Studies will offer a semester's program in London beginning with the spring semester 1974. The program will concentrate upon the social sciences and upon the emergence of a united Europe from the vantage point of Great Britain. Core courses, required of all students, will be taught in Political Science, Contemporary History, Economics and Philosophy (the integrating course designed to examine social ideologies from the standpoint of political philosophy). Additionally, students will follow a course in the contemporary novel, theater or work at an independent study project.

After thirteen weeks in London, students will spend three weeks at the University of Freiburg in Germany, where University professors will offer a German perspective on material studied in London.

Requirements: previous course work in history, political science, economics. No language requirement. English composition recommended.

The affiliation of Holy Cross with the Institute of European Studies does not prevent a student from exploring other accredited foreign programs.

Further information about the Junior Year Abroad program may be obtained from the Chairman of the Junior Year Abroad Committee.

Reserve Officer Training Program

All students of Holy Cross College are eligible to apply for the ROTC programs of the Air Force and Navy. The Air Force program leads to a commission in the Air Force Reserve and prepares for specific duties in the Regular Air Force, the Air Force Reserve and Air National Guard. The Naval ROTC program prepares qualified officers for the Navy and Marine Corps, the Naval Reserve and the Marine Corps Reserve. Both Air Force and Navy ROTC provide financial emoluments, including full scholarships to the especially qualified cadet or midshipman. Detailed information regarding the ROTC programs can be found elsewhere in the catalog under COURSES OF INSTRUCTION and FINANCIAL AID.

Worcester Consortium for Higher Education, Inc.

Admission to Holy Cross means availability to ten Consortium institutions. Students of the College may participate in special educational, cultural and social endeavors provided by the Consortium. The member institutions, all located in the Worcester area, organized in 1967 to broaden their activities through cooperative interchange. Specialized courses are available for credit
away from the home institution under a system of cross registration. Participating institutions are Anna Maria College, Assumption College, Clark University, Holy Cross College, Worcester Polytechnic Institute, Worcester State College, Becker Junior College, Leicester Junior College, Quinsigamond Community College, University of Massachusetts Medical School, and Worcester Junior College.

In addition to the eleven colleges, a group of associate organizations participate with the Consortium in providing further enrichment to college curricula: the Worcester Art Museum, the Worcester Foundation for Experimental Biology, the Worcester Historical Society, the American Antiquarian Society, the Craft Center, Old Sturbridge Village, the Worcester Science Center.
Institutes

The College is conscious of the need to contribute of its intellectual resources and the skills of its personnel to the community in which it lives. Matching its educational ideal of civic responsibility, as a civic enterprise it has offered summer institutes for secondary school teachers in mathematics, science, and optics/electronics.

The Institute of Industrial Relations, conducted during the evening hours, and for which no academic credit is given, aims at the intellectual and moral enrichment of the life of participants from management and labor unions. Stress is placed on knowledge of economic conditions in industry, current labor problems, and labor law.

In-Service Institute in Physical Science
Rev. Robert B. MacDonnell, S.J., Director

Fundamental Chemistry —
Prof. Robert W. Ricci, Ph.D.
This course is intended to teach several of the basic physical laws governing chemical reactions and to apply the laws to representative chemical systems. Laboratory exercises are designed to illustrate the basic principles learned in class. Six credit hours. (1972-1973)

Introduction to Earth Science —
Prof. Ram Sarup, Ph.D.
This course surveys the physical state of the earth and its environment, including such topics as astronomy, geology, oceanography, and meteorology. Six credit hours. (1973-1974)

Basic Physics —
Prof. Ram Sarup, Ph.D.
This course covers the fundamental concepts of classical and modern Physics, emphasizing those physical principles which are fundamental to our understanding of the natural world, such as the conservation of energy and momentum, electric charge, waves, fields, the molecular structure of matter and the structure of the atom. Six credit hours. (1974-1975)
Dinand Library

The library houses a collection of over 310,000 volumes and currently subscribes to over 1,700 journals in all fields of endeavor. Audio-visual resources consist of newspapers, journals, and music books on microfilm, microcard, and microfiche, as well as classical and spoken records. The New York Times holdings run from 1851 to the present. The student is afforded ample study areas in the Main Reading Room, the Stack area, the Periodical, Browsing, Reserve Book and special study rooms. The Main Reading Room contains the card catalogue of the library’s holdings, the circulation desk, an information desk, major reference works for the various academic disciplines, and suitable accommodations for reading and study.

The students are instructed in the use of the library and made familiar with both the instruments and methods of research. The Periodical room affords a pleasant study atmosphere amidst a multitude of periodicals and significant periodical indices. The Browsing Room offers an air of comfort and relaxation where the student may smoke while studying. It houses the fine arts collection. The second floor of the library offers our microfilm resources and equipment, a second listening room, rare book rooms and study areas.

The library boasts of many special collections consisting of incunabula (books printed prior to 1500), early 16th and 17th century Jesuitiana, Americana (books published in America prior to 1820), manuscript collections, Louise Imogen Guiney Memorial Collection, David I. Walsh Collection and many others.

The Library is a member of a group of 15 area libraries (academic, private, public) known as WACL (Worcester Area Cooperating Libraries) under the aegis of the Worcester Consortium. This group has published an area Union List of Serials, sponsored library projects and studies, and operates a twice daily shuttle service for inter-library loans among the libraries.

The College Chaplain

The Office of the College Chaplain is a center of service to the members of the entire college community through pastoral counseling, the proclamation of the Gospel, the celebration of the Liturgy, Christian witness of social and moral issues, draft counseling, independent meditation between various campus groups: in short, the coordination of the various expressions of and energies for religious life on campus.

The Chaplain's Office also seeks to maintain close personal contact with non-Catholic members of the community with due respect for their freedom of conscience and seeks to be of service to them in any way possible. Members of this community who adhere to traditions and faiths other than the Catholic faith should feel most welcome to attend any campus liturgical services to which they are inclined. During the course of the year, some inter-faith prayer services are held as an expression of concern for the non-Catholic student, and ministers of other faiths are frequently invited to speak or preach at Holy Cross as an expression of the ecumenical concern of the whole community. Through the Chaplain's Office, opportunities can be created for students to meet local ministers of their faith.

Throughout the course of the academic year, the Office of the Chaplain attempts to provide regular inter-disciplinary dialogues, programs and frequent guest speakers on contemporary issues to help students personalize their faith experience in the light of their questions and developing views.
Student Personnel Services

The offices of the Dean of Students, Campus Center, College Chaplain, Counseling Center, Financial Aids, Placement and Student Health Services make up the area of Student Personnel Services. Each of these departments offers to the student a multi-service program which provides guidance and assistance in helping meet long range and short range needs.

Student Services

The Student Health Service Program and the Student Accident and Sickness Insurance are designed to provide broad medical coverage and to relieve parents of possible financial strain in meeting this type of unanticipated expense.

Student Health Service

The College's Infirmary provides board, room, professional nursing care 24 hours a day, medicines prescribed by our staff, whirlpool treatments for non-athletic students as ordered by our physician, bandages, dressings, etc., for all boarding and off-campus resident students. All boarding and off-campus resident students are required to enroll in the Health Service Program: the fee is $50.00 per year. Beginning with the third day of confinement, off-campus residence students will incur a nominal charge ($5.00 per day) for room and board.

Student Accident and Sickness Insurance

Expenses incurred as a result of any accident or sickness are reimbursed under a liberal schedule. Reimbursement up to $2,750 is possible under the Accident Benefit Schedule while the Sickness Benefit Schedule compensates for hospital, surgical, nursing, physician's costs, etc. Information regarding benefits and charges for the Student Accident and Sickness Insurance will be explained by the Fred S. James Company in the first semester billing notice.

Residence Hall Accommodations

Because Holy Cross is a residential college, residence hall life is a significant factor in the student's education. The Houses are supervised by a Resident Assistant staff of upperclassmen selected for their maturity, responsibility, and leadership characteristics. Each House has its own House Council and House Judicial Board to which members are elected in the fall. Resident chaplains live on several resident corridors and offer an opportunity for
The College Chaplain

The Office of the College Chaplain is a center of service to the members of the entire college community through pastoral counseling, the proclamation of the Gospel, the celebration of the Liturgy, Christian witness of social and moral issues, draft counseling, independent meditation between various campus groups: in short, the coordination of the various expressions of and energies for religious life on campus.

The Chaplain’s Office also seeks to maintain close personal contact with non-Catholic members of the community with due respect for their freedom of conscience and seeks to be of service to them in any way possible. Members of this community who adhere to traditions and faiths other than the Catholic faith should feel most welcome to attend any campus liturgical services to which they are inclined. During the course of the year, some interfaith prayer services are held as an expression of concern for the non-Catholic student, and ministers of other faiths are frequently invited to speak or preach at Holy Cross as an expression of the ecumenical concern of the whole community. Through the Chaplain’s Office, opportunities can be created for students to meet local ministers of their faith.

Throughout the course of the academic year, the Office of the Chaplain attempts to provide regular inter-disciplinary dialogues, programs and frequent guest speakers on contemporary issues to help students personalize their faith experience in the light of their questions and developing views.
Student Personnel Services

The offices of the Dean of Students, Campus Center, College Chaplain, Counseling Center, Financial Aids, Placement and Student Health Services make up the area of Student Personnel Services. Each of these departments offers to the student a multi-service program which provides guidance and assistance in helping meet long range and short range needs.

Student Services

The Student Health Service Program and the Student Accident and Sickness Insurance are designed to provide broad medical coverage and to relieve parents of possible financial strain in meeting this type of unanticipated expense.

Student Health Service

The College's Infirmary provides board, room, professional nursing care 24 hours a day, medicines prescribed by our staff, whirlpool treatments for non-athletic students as ordered by our physician, bandages, dressings, etc., for all boarding and off-campus resident students. All boarding and off-campus resident students are required to enroll in the Health Service Program: the fee is $50.00 per year. Beginning with the third day of confinement, off-campus residence students will incur a nominal charge ($5.00 per day) for room and board.

Student Accident and Sickness Insurance

Expenses incurred as a result of any accident or sickness are reimbursed under a liberal schedule. Reimbursement up to $2,750 is possible under the Accident Benefit Schedule while the Sickness Benefit Schedule compensates for hospital, surgical, nursing, physician's costs, etc. Information regarding benefits and charges for the Student Accident and Sickness Insurance will be explained by the Fred S. James Company in the first semester billing notice.

Residence Hall Accommodations

Because Holy Cross is a residential college, residence hall life is a significant factor in the student's education. The Houses are supervised by a Resident Assistant staff of upperclassmen selected for their maturity, responsibility, and leadership characteristics. Each House has its own House Council and House Judicial Board to which members are elected in the fall. Resident chaplains live on several resident corridors and offer an opportunity for
counsel and advice. Social, educational and other programs are sponsored by individual residence halls throughout the year.

The residence halls of Holy Cross have accommodations for 1,900 students. Most rooms are designed for two students. Each student room is provided with the essential articles of furniture, such as beds, chairs, desks, lamps, locker, mattresses, telephones. Students contract privately with a linen service company recommended by the College which will supply and launder two sheets, one pillow case, two bath towels and two hand towels each week of the school year.

The Counseling Center

The purpose of the Counseling Center is to assist students in evaluating and dealing more effectively with their potential; thereby achieving academic, vocational and personal goals. The Counseling Center offers the following programs:

*Freshman Research and Evaluation Program.* All entering Freshmen participate in a research and evaluation program. The purpose of the program is to obtain information about each student that will help in understanding his needs and values. This information will also be used for long-term institutional research and evaluation.

*Reading Improvement and Study Skills Program.* Since the College realizes that even students of high intellectual promise may not do well in their studies because of poor reading or study skills, the Counseling Center offers special courses in these areas during each semester. Through instruction and intensive practice in these courses, the student acquires effective study skills and the ability to read rapidly with a high degree of comprehension.

*Educational and Vocational Guidance.* Staff members are available to help students achieve their educational and vocational goals. The Counseling Center also maintains an extensive library of occupational information describing the vocational opportunities available to college graduates.

*Personal Counseling.* Counseling to help students resolve personal problems which might interfere with their ability to succeed at Holy Cross or affect their personal well-being is offered at the Center. The discussions with a staff member are completely confidential.

*Human Development Programs.* During the academic year, the Counseling Center sponsors a number of lectures and open discussions in a continuing human development series. The series provides students with the opportunity to acquire information and to satisfy various common needs and concerns.

The Counseling Center is located in the Hogan Campus Center 209. Students or faculty interested in the services provided may stop in or call at the Center Monday through Friday, from 9 A.M. to 4:45 P.M.

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Career Counseling and Placement Office

This Office offers career counseling for all Holy Cross Seniors and alumni and in particular for those interested in careers in business and government. Campus interviews are arranged with personnel officers of business and industrial firms and representatives of governmental agencies.

For those Seniors applying to graduate schools of business, interviews are arranged with graduate school representatives in the Fall.

Undergraduates are urged to utilize the facilities of the Placement Office, particularly those interested in careers in government or business. Summer job counseling is also provided.

A series of career guidance talks and communications are offered for the Seniors, starting in late September. Alumni and other business and professional leaders speak informally of career opportunities and aid in the art of interviewing.

Henry M. Hogan Campus Center

The Henry M. Hogan Campus Center offers a wide variety of services, and houses numerous facilities, providing a broad social, cultural, educational and recreational program for the college community.

The Campus Center includes meeting rooms, lounges, bowling lanes, student organization and administrative offices, the college bookstore, a cafeteria and snackbar, private dining rooms, ballroom and party rooms, an information center, barber shop, duplicating center, and record and art print libraries. In addition, substantial day student facilities are provided to accommodate the needs of non-resident students.

The Campus Center Board of Directors represents all members of the college — students, faculty, and staff — and oversees the activity of the Campus Center, in coordination with the Campus Center staff.

In its program, the Campus Center is committed to continuing education and to complementing formal instruction with meaningful leisure time activities. Participation in and the development of mature appreciation for social, cultural, intellectual and recreational activities for the entire college community is the primary goal of the Campus Center.

Cultural Events

Each year the educational program of the college is enriched by fall and spring programs of lectures, theatrical productions, concerts, and classic films series. Eminent artists, distinguished men of letters and science, political and social scientists are invited to the campus for formal and infor-
mal presentations. In addition to the campus program, the city of Worcester offers many cultural opportunities to the students at Holy Cross. Several fine museums are located in the city, including the famous Worcester Art Museum, the John W. Higgins Armory Museum, and the Worcester Science Museums, as well as the Library of the American Antiquarian Society. The newly-constructed Worcester Public Library is also available to Holy Cross students. Old Sturbridge Village, a re-creation of a colonial village, is located nearby. The Annual Worcester Music Festival is a popular event for Holy Cross students.
Expenses and Financial Aid

EXPENSES

TUITION
All Classes 2,730

BOARD AND ROOM
All Classes 1,180

STUDENT HEALTH SERVICE PROGRAM
All Boarding and Off-Campus Students 50

APPLICATION FEE
A fee of $15 (non-refundable) must accompany all applications for admission to the College. 15
Student Activity Fee assessed of all students in 1st semester 36

ACCEPTANCE DEPOSITS
Candidates, usually notified of acceptance from January to April, are obliged to forward a non-refundable reservation deposit of $200. This fee must be submitted by May 1, and will not, under any circumstances, be refunded. The amount deposited will be credited toward payment of the first semester bill.

ROOM DEPOSITS
All students who wish to reserve a room on campus during the next academic year, must signify their intent and pay a non-refundable room deposit of $100 by April 15. This deposit will be credited at the rate of $50 per semester toward room charges. Entering freshmen who have paid a Reservation deposit of $100 do not have to pay this deposit.

Audit: (Per Semester Hour PSH) ........................................115
Clerical Charge: (Late payment of Semester fees) ......................10
Examination, Absentee: $5 per exam, but not to exceed a total of $15
Examination, Conditional: (Freshmen, first Semester only) ..........5
Extra Course Fee: (By Arrangement with Dean and Treasurer) .........
Graduation Fee: (Second Semester, senior year) ......................... 20
Late Registration Fee: .................................................. 10
Reading Clinic Fee: ..................................................... 40
Transcript: ................................................................. 1
I.D. Card: Freshmen & Juniors ........................................... 2
Health Insurance; Billed by Agency (Optional) ......................... 40

BOOKS AND PERSONAL EXPENSES

A fair estimate of the average personal and incidental expenses for the school year is $400. Books and supplies vary in cost from $100 to $150 for the year.

PAYMENT OF BILLS

Bills for one-half of each of these fees will be issued not later than two weeks prior to the opening of each semester, and are due and payable by the date indicated on each statement rendered. Payment is to be made by check or money order, payable to the College of the Holy Cross, and sent to the Treasurer, College of the Holy Cross, Worcester, Massachusetts 01610.

INSTALLMENT PAYMENTS

No provision is made for installment payment, whether monthly, quarterly or otherwise, directly with the College. Parents who wish to make such arrangements should do so with a bank or other commercial firm that handles such financing.


Many states have a bank guarantee program for long-term, low-interest education loans. Certain religious, labor and service organizations, as well as some companies also have loan programs available to members or employees.

Parents should investigate and evaluate the different programs before committing themselves to a particular repayment schedule. Whenever required, the College will be happy to cooperate with parents in arranging for any loan program that will make it easier for parents to meet the College's own requirements that semester fees must be paid in advance of registration.

REFUNDS OF TUITION, BOARD AND ROOM

During the first five weeks of each semester, there will be a proportional re-
fund of tuition; after five weeks there will be no refund.

Once a student has contracted for and occupied a room on campus there will be no refund of the semester fee.

During the semester there will be a proportional refund of board charges for students who withdraw or move off campus.

**TELEPHONES**

The College provides a telephone in each student room. No fee is charged and the telephone may be used both for intra-campus calls, and, on an unlimited no-fee basis, for off-campus calls to the areas listed in the Worcester Directory. Toll calls are billed directly to the student at cost.

**TOLL CALLS**

Toll calls are the personal responsibility for the student(s). Toll calls made from a student telephone and reverse-charge calls received, will be automatically billed by the Telephone Company to the student telephone involved. Such charges must be paid to the Telephone Company and not to the College.

**NON-PAYMENT OF TELEPHONE BILLS**

The College assumes no responsibility for supervising collection of telephone bills. The Telephone Company has informed the College that if such bills are not paid by the next billing date after the charge is made, service will be discontinued. If payment is not made within one week after discontinuance of service, the Company will remove the instrument. Re-installation will not be permitted until all charges are paid and a re-installation fee collected in advance.

**COLLEGE EXPENSES**

The charges made by the College are subject to change at any time by formal action by the Board of Trustees. Changes will be enumerated in addenda to this catalogue in 1974 and 1975.

**FINANCIAL AID**

**Freshmen**

In order that the opportunity for an education at Holy Cross College may be within the reach of as many qualified students as possible, the College offers scholarships, loans, and employment, either singly or in combination, to those who could not otherwise afford such an education. Awards are based on academic promise; high qualities of character and citizenship, and demonstrated financial need. For example, in 1972-73, more than 30 per cent of the freshman class were receiving some form of College-administered financial assistance.
To apply for aid, an incoming student need only indicate on an application for admission that he or she would like to be considered for financial assistance. There is space provided for this purpose on the second page of the application form. Should an incoming student fail to indicate a wish to be considered for financial assistance on the admission application and later decide to initiate a request for financial aid, he or she must initiate that request in writing with the Director of Financial Aid. The only other requirement would be submitting the Parents’ Confidential Statement to the College Scholarship Service, preferably before January 1. This form (P.C.S.) is available at the applicant’s secondary school and is used to determine the amount of assistance a student will need to attend the College for one year. Aid candidates are usually notified of financial awards from the College, usually within a week after they are informed of the decision on their application for admission. Students can expect to receive notification in March or April after all the necessary credentials have been received and evaluated. Students who enroll and who have been tendered financial assistance will be required to submit a notarized copy of their parents’ Federal Income Tax Return for the immediately preceding tax year as a requirement for their financial aid program and finalization of their award.

Upperclassmen and Renewal Awards
Each year Holy Cross students who receive College-administered financial assistance must file a new P.C.S., a Holy Cross Financial Aid Application, and a notarized copy of their parents’ Federal Tax Return for the immediately preceding tax year. Forms are available after January 1 from the Financial Aid Office. Students who wish to apply for financial assistance for the first time should follow this same procedure and indicate they are first time applicants. The Holy Cross application and tax return copy must be on file with the Financial Aid Office and the Parents’ Confidential Statement forwarded to the College Scholarship Service at Princeton, N.J., before March 15 to assure sufficient time for processing by award notification date.

Scholarships
Last year, more than 200 entering freshmen were awarded Holy Cross scholarships with stipends ranging from $200 to as much as $3,000 depending upon the student’s financial need. Each applicant is considered for all awards for which he or she may be eligible, including many endowed and restricted scholarships, as well as several Holy Cross Alumni Club grants. No special application other than the P.C.S. is necessary for consideration for these awards. In general, scholarships and/or additional assistance will be renewed each year provided the student continues to demonstrate need for such assistance. Stipends, however, may be adjusted where the family resources decrease or increase significantly. There are a limited number of honorary scholarships awarded in recognition of scholastic excellence and where financial need is not a factor.
In addition to awards made from College funds, many students will receive scholarship assistance from corporations, foundations, civic groups, parent and school associations, and service clubs. Every student who is interested in financial help should be alert for information about any outside scholarship aid for which independent applications must be submitted. The Financial Aid Committee at Holy Cross expects students who are residents of Connecticut, Massachusetts, New Jersey, Pennsylvania or Rhode Island to apply for the scholarship program in their home state. Application information is available either in high school guidance offices or the appropriate state agencies listed below. Since each State Scholarship Program has its own deadline for applications, it is advisable to make application early in the academic year.

State of Connecticut
State Scholarship Commission
P.O. Box 1320
Hartford, Connecticut 06115

State of Massachusetts
Board of Higher Education
Scholarship Office
182 Tremont Street
Boston, Massachusetts 02111

State of New Jersey
Department of Higher Education
225 West State Street
P.O. Box 1293
Trenton, New Jersey 08625

Pennsylvania Higher Education Assistance Agency
Towne House
Harrisburg, Pennsylvania 17102

Marjorie E. Schoepps
Associate Program Director
State of Rhode Island Scholarship Program
Educational Testing Service
Princeton, New Jersey 08540

**Loans**

1. Federal Guaranteed Loan Program: This is the primary source of educational loans. Under the terms of the Higher Education Amendments of 1972, students may borrow funds for college expenses from banks or other incorporated state and private lending institutions. It is recommended that the student borrower apply at a home town bank, preferably one with which his or her family does its banking. The amount loaned may vary from state to state, but the legal maximum is $2,500 each year. The rate of interest is 7 per
cent simple interest, and in many cases, this interest will be paid by the Federal Government. In cases where the student borrower is not eligible or does not apply for interest benefits, the 7 per cent rate accrues from the first date of the loan. In loans where the Government subsidizes the interest, repayment of principal and interest commences upon termination of formal studies. Deferment of payment and interest accrual is permitted during graduate studies and military service.

2. National Direct Student Loan Program: Holy Cross administers a very limited number of loans under the authority of this Federal program. No student should expect any substantial loans from the N.D.S.L. fund after July 1, 1974, when the program will commence phase out in favor of a broad Federal Guaranteed Loan Program as described above. N.D.S. loans carry an interest rate of 3 per cent simple interest, and repayment provision are similar to the Guaranteed Loan Program.

Due to the limited amount of funds in the N.D.S.L. Fund, priority for loans under this program will be extended to students from states or areas in which loans made under the Federal Guaranteed Student Loan Program are not readily available. Before approving a National Defense Student Loan, the College may require evidence that the student’s application for a Guaranteed Loan has been refused.

Basic Educational Opportunity Grants
Effective July 1, 1974, the Basic Educational Opportunity Grant Program (B.O.G.) will be available to qualified undergraduates from the Federal Government. These grants may be in amounts up to $1,400 depending on the financial circumstances of each family. This program is national in scope, and the student must obtain and process his application to the government agency entirely apart from his application for financial aid at Holy Cross or another college. Forms for application for Basic Grants are available at all Post Offices, Federal Offices, Secondary Schools, Colleges, and many State and County offices. All students are urged to apply for this grant. There is no cost for processing the Basic Grant application.

Since this is the basic award for all additional financial aid, it is expected that each aid applicant will apply despite the fact that this program is not administered by the College. The College does, however, assist the student in the final processing of the Basic Grant.

Employment
In addition to scholarships and loans, employment is available to students as part of the financial aid package. Campus jobs as well as the Federal Work-Study Program provide the opportunity to earn between $200 and $600 per academic year. No entering Freshman should count on earning any substantial sum through work unless he has a definite promise of employment before the opening of College in September. Wages are based on an hourly rate and are paid directly to the student. There are miscellaneous jobs in the Worcester community and the Career Counseling and Placement Office in Room 274 O’Kane Hall will serve as a “clearing house” for such oppor-
The Financial Aid Committee expects families to give assistance to the extent they can, both from income and from assets, and the Committee follows quite closely in its calculations the policies and practices developed by the College Scholarship Service. The Committee understands that the actual amount of help offered at any income level will vary widely according to special circumstances — savings, investments, medical bills, debts, educational costs of children in college, and other obligations.

**ROTC Scholarships and Emoluments**

The ROTC programs of the Air Force and Navy offer full scholarships to selected cadets and midshipmen; for advanced (junior and senior) students a tax-free stipend (currently $100 per month) is paid whether or not the student is receiving an Air Force or Navy scholarship. Additional information can be obtained by directly contacting the Air Force and Naval ROTC offices on campus.

For additional information on financial assistance not related to ROTC programs, address inquiries to:

- Office of Financial Aid
- Fenwick Hall
- College of the Holy Cross
- Worcester, Massachusetts 01610

**Financial Aid Acknowledgements**

Many Holy Cross alumni clubs sponsor students of their selection for complete or partial tuition scholarships. Among those who have participated in this program are:

- Holy Cross Club of Boston
- Holy Cross Alumni Club of Worcester
- Holy Cross Club of Rhode Island
- Berkshire County Holy Cross Club
- Springfield, Massachusetts Alumni Association Club
- Holy Cross Club of Maine
- Holy Cross Club of New York
- Holy Cross Club of Eastern New York
- Rochester Alumni Club
- Eastern Connecticut Holy Cross Club
- Plymouth Alumni Club

Many of these clubs are annual contributors; others contribute at various times.
Grateful acknowledgement is also due to the many corporations, foundations, fraternal organizations, P.T.A.'s, high school associations and similar groups who have aided students of their selection by financial contributions toward tuition costs.
Regulations and Responsibilities

It is the constant purpose of the College to encourage the growth of personal and corporate responsibility consistent with the mature liberty of the educated man. Serious breaches of the code that demands respect for order, morality, personal honor and the rights of others will necessitate withdrawal from the College. The College reserves the right to dismiss a student at any time without any definite public charge. Detailed regulations and customs governing discipline are found in the Student Handbook.
Scholarships

General

The financial aid program at Holy Cross has been established to assist students who would otherwise not be able to attend the College due to financial restrictions. In addition to the endowed scholarships and restricted awards listed below, the College sets aside substantial funds from its annual operating income to assist worthy candidates in meeting their educational expenses.

Endowed Scholarships

THE GOVERNOR AMES SCHOLARSHIP
Established in 1887 by Governor Oliver Ames. (Income on $1,000.00)

ANONYMOUS
Established in December, 1965, by an anonymous donor. Income to be used for scholarships to be awarded at the discretion of the President of the College. Preference to students of any creed from the Diocese of Springfield, Massachusetts. (Income on $69,000.00)

ANONYMOUS
Established in February 1966 by an anonymous donor. Income to be used from scholarships to be awarded at the discretion of the President of the College. (Income on $5,000.00)

JULIA MARIA BAKER SCHOLARSHIP
Established in 1944 by a bequest of Philip Hope Baker in memory of his mother, to provide scholarships for adopted children. (Income on $10,816.00)

THE EUGENE A. BICKFORD SCHOLARSHIP
Established in October, 1932, from the estate of Mrs. Mary A. Magenis of Brookline, Mass., in memory of her brother, the late Eugene A. Bickford, '96. The annual income to provide for the education of a deserving student under such conditions and regulations as imposed by the faculty of the College. (Income on $5,000.00)
THE ELIZABETH L. BILLINGTON AND CATHERINE CONLON MEMORIAL FUND
Established in May 1972 by a bequest from the estate of Elizabeth L. Billington to grant scholarship assistance to deserving students attending Holy Cross College in such amounts and in such times as the Trustees in their discretion shall deem advisable.

THE REV. CHARLES E. BURKE SCHOLARSHIP
Established in 1895. Appointment to be made from residents of St. Francis Parish, North Adams, Mass. (Income on $3,000.00)

THE JAMES M. BURKE SCHOLARSHIP
Established on April 1, 1950, from the Estate of William H. Burke. The beneficiary is to be selected by the Trustees of the College. (Income on $11,662.69)

CAPTAIN JOHN J. BURKE SCHOLARSHIP FUND
Founded and augmented by gifts in memory of Captain John J. Burke, USMC., '65. Income to be awarded to a student in the N.R.O.T.C. Program. (Income on $3,092.00)

THE DR. AND MRS. HARRY P. CAHILL SCHOLARSHIP
Established in June, 1963, from a Trust Fund established by Dr. Harry P. Cahill and the Estate of his wife, Anne R. Cahill. Income to be used to aid students who lack sufficient financial means for their education. Selection is to be made by college authorities. (Income on $55,543.48)

THE ROBERT J. CAIRNS MEMORIAL FUND
Established on September 24, 1953, by bequest from the estate of Alfred F. Finneran, for scholarship aid to worthy students. (Income on $5,000.00)

THE THOMAS CALLAGHAN SCHOLARSHIP
Established in 1914 by the late Thomas Callaghan of Leicester, Mass., limited to residents of Worcester County “preference to be given to those preparing for the priesthood.” (Income on $2,000.00)

BRIDGET CARNEY SCHOLARSHIP FUND
Established in 1972 by Dr. James I. Kearney in memory of his mother, Bridget Carney. The income from the fund is to provide aid to worthy and deserving students whose parent or parents were parishioners of St. Ignatius Roman Catholic Church, Kingston, Pennsylvania. (Income on $31,677.00)

THE HONORABLE JAMES BERNARD CARROLL SCHOLARSHIP
Established in 1939 by Mrs. James Bernard Carroll as a memorial of her
husband, the late Justice Bernard Carroll of the class of 1878. Restricted to graduates of St. Michael's Cathedral High School, Springfield, Massachusetts. Selection to be made by the President of Holy Cross College and the Reverend Rector of St. Michael's Cathedral, Springfield, on candidate's character, scholarship and extracurricular achievements.

JOHN P. CHIOTA, JR. SCHOLARSHIP FUND
Established by his wife and family in memory of John P. Chiota, Jr., '31. Income to be awarded to worthy and needy students with preference given to graduates of Fairfield Preparatory School. (Income on $2740.00)

WILLIAM L. AND HAZEL B. CLIFFORD SCHOLARSHIP
Established in 1966. (Income on $2,500.00)

THE FRANK D. COMERFORD MEMORIAL FUND
Established by Archibald R. Graustein in 1959. (Income on $18,500)

CLASS OF 1963
Pledges of members of the class of 1963 to Development Fund to be used to establish a scholarship.

CLASS OF 1964 SCHOLARSHIP
Pledges of members of the class of 1964 to Development Fund to be used to establish a scholarship.

THE CONNECTICUT VALLEY ALUMNI SCHOLARSHIP
Established in 1912 by the Alumni of Connecticut Valley. (Income on $1,725.00)

THE MAURICE CONNOR MEMORIAL SCHOLARSHIP
Established in 1929 by Mr. John T. Connor in memory of his brother, Maurice. The intention of the donor is to provide, for one boy, board, room, tuition and fee charges, as far as the income will provide them. The single beneficiary is to be chosen by the pastor of St. Mary's Church, Westfield, Mass. (Income on $15,000.00)

THE MONSIGNOR GEORGE S. L. CONNOR SCHOLARSHIP
Established on October 18, 1955, by gift of the late Msgr. George S.L. Connor, '07. Selection to be made by the president of the College who shall give first preference to a worthy applicant who is a member of Holy Name Parish in Springfield, Massachusetts. If no such eligible candidate applies, then such a candidate who graduates from Cathedral High School shall be considered; if none such, then any applicant from the Springfield high schools. Candidates must pass a scholarship test and give evidence of good character and leadership qualities.
MICHAEL COOGAN SCHOLARSHIP FUND
Established in 1969 by a bequest from the estate of Adeline V. Callahan to educate a boy or boys who are residents of Millbury, Massachusetts and who intend to enter the priesthood. (Income on $21,269.58)

THOMAS AND MARY A. CORRIGAN SCHOLARSHIP
Established in 1972 by a bequest of Henry J. C. Corrigan. (Income on $2,000.00)

THE THOMAS COSTELLO AND ANNA COSTELLO SCHOLARSHIP
Established on December 9, 1947, by bequest of Susan A. Costello in memory of her parents, and by a bequest from the estate of Fanny Goodwin Hobbs. Income to be used to aid a student who lacks sufficient financial means for his education and who has expressed the intention of entering the priesthood. (Income on $10,000)

THE CROWLEY FAMILY MEMORIAL SCHOLARSHIP I.
Established on July 2, 1947, by bequest of Miss Bridget T. Crowley of Springfield, Mass. Beneficiary to be selected by competitive examination and is open to students of the parochial and public high schools of Springfield, Mass., who are morally, mentally and physically worthy and competent and who show promise of ability, but who have such limited financial means that, if not aided by a scholarship, they would be unable to attend college. (Income on $13,033.00)

THE CROWLEY FAMILY MEMORIAL SCHOLARSHIP II.
Established on July 2, 1947, by bequest of Miss Bridget T. Crowley of Springfield, Mass. Conditions same as the Crowley Family Memorial Scholarship I. (Income on $14,642.14)

THE CROWLEY FAMILY MEMORIAL SCHOLARSHIP III.
Established in 1947 by bequest of Miss Bridget T. Crowley of Springfield, Mass. Conditions same as the Crowley Family Memorial Scholarship I. (Income on $14,122.99)

THE CRUSADER COUNCIL KNIGHTS OF COLUMBUS SCHOLARSHIP
Established in June, 1963 by a gift of $5,000.00 toward the establishment of a $15,000.00 scholarship in honor of Rev. Joseph F. Busam, S.J., and in gratitude for his many years of service as Chaplain of the Crusader Council. Income to be used with preference to be given to premedical or predental students. (Income on $15,000.00)
THE RIGHT REV. MONSIGNOR DANIEL F. CURTIN SCHOLARSHIP
Established in 1921 by the Rt. Rev. Monsignor Daniel F. Curtin, Glens Falls, N.Y., to be appointed by the pastor of St. Mary's Church, Glens Falls, N.Y. (Income on $10,000.00)

DR. AND MRS. CARL J. DE PRIZIO SCHOLARSHIP
Established on October 30, 1959, by gift of 300 shares of Boston Fund, Inc. Income to be used for award to deserving student in sciences.

THE DANIEL T. DEVINE SCHOLARSHIP
Established in October, 1945, from the estate of Mary F. Devine in memory of her brother, Rev. Daniel T. Devine. To be awarded as a result of competitive examination to the member of the graduating class of St. Mary's Parochial School, Milford, Mass., who has attended said high school for four years and who has been a member of St. Mary's Parish throughout his high school course. (Income on $15,000.00)

DIOCESE OF WORCESTER SCHOLARSHIP
Established by the Most Rev. Bernard J. Flanagan, D.D., Bishop of Worcester. The income of which is to be utilized for increased student aid. (Income on $105,000.00)

DANIEL F. DOHERTY SCHOLARSHIP FUND
Established in 1969 by a bequest from the late Alice Dillon Doherty, in memory of her husband Daniel F. Doherty (LL.D. '26). Income to be used for aiding needy students, who are residents of Westfield, Mass. (Income on $10,000.00)

THE JAMES F. DONNELLY, '99 SCHOLARSHIP
Established on May 11, 1956 by gift from Sylvan Oestreicher Foundation. (Income on $15,000.00)

EARLS FAMILY SCHOLARSHIP
Established by William T. Earls to provide scholarships for worthy young students as determined by the College. (Income on $11,000.00)

THE EASTMAN KODAK COMPANY SCHOLARSHIP
Established on September 16, 1960. (Income on $7,200.00)

THE THEODORE T. AND MARY G. ELLIS SCHOLARSHIP FUND
Established in 1941 by the estate and through the generosity of the late Theodore T. and Mary G. Ellis. From the income of this fund, several scholarship awards of full or partial tuition are annually granted to residents
of the City of Worcester. (Income on $283,834.49)

THE REV. PATRICK J. FINNEGAN, P.R. SCHOLARSHIP
Established on November 28, 1955, by bequest from the estate of Rev. Patrick J. Finnegan. Income to be used to assist needy boys from Portsmouth, N.H. (Income on $5,032.60)

THE REV. JOHN J. FORAN, D.D. MEMORIAL SCHOLARSHIP
Established in 1962 by the Rev. William A. Foran to provide scholarships for graduates of Catholic secondary schools in the present diocese of Worcester and Springfield. (Income on $36,852.00)

GENERAL MOTORS COLLEGE PLAN SCHOLARSHIP
A four-year scholarship offered semi-annually by General Motors Corporation. The amount of the award varies with the financial need of the recipient as determined by the General Motors Scholarship Committee.

THE "IN MEMORY OF DAVID GOGGIN" SCHOLARSHIP
Established in 1925 by Mrs. Catherine M. Goggin, in memory of David Goggin. Preference to be given a relative. (Income on $1,000.00)

THE MONSIGNOR GRIFFIN SCHOLARSHIP
Established in 1895, limited to residents of St. John’s Parish, Worcester, Mass. (Income on $1,000.00)

THE THOMAS F. GROGAN SCHOLARSHIP
A memorial of the deceased father of Dr. Richard H. Grogan, '35, and his brother, Fr. Thomas Grogan, S.J. (Income on $4,100.00)

THE MARY AGNES HABERLIN FOUNDATION
For worthy students chosen by the President or Faculty of the College. (Income on $249,111.14)

THE JOSEPH T. HACKETT MEMORIAL SCHOLARSHIP
Established by a bequest from the estate of Malachi C. Hackett. Income to be awarded to worthy and needy students with preference given to residents of Meriden, Conn. (Income on $50,000.00)

THE JOHN H. HALLORAN SCHOLARSHIP I.
Established in 1909 by Mr. John H. Halloran of New York, as a memorial to his brother, the late William J. Halloran, of Worcester, competition open to the country. (Income on $12,000.00)
THE JOHN H. HALLORAN SCHOLARSHIP II.
Established in 1921 by Mr. John H. Halloran of New York, as a memorial to his brother, the late William J. Halloran, of Worcester. Selection to be made from students of the public and parochial schools of Northampton, Mass., by means of competitive examinations. (Income on $12,000.00)

THE REV. THOMAS STEPHEN HANRAHAN SCHOLARSHIP
Established in January, 1963, by a bequest from the Estate of Margaret Ellen Kearney as a memorial to the Rev. Thomas Stephen Hanrahan. Income to be used to aid a worthy student. (Income on $5,000.00)

THE REV. JEREMIAH J. HEALY SCHOLARSHIP I.
Established in 1912 by the Rev. Jeremiah J. Healy, of Gloucester, Mass., for a candidate for the priesthood worthy of financial aid. (Income on $1,500.00)

THE REV. JEREMIAH J. HEALY SCHOLARSHIP II.
Same as the “Rev. Jeremiah J. Healy Scholarship I.” (Income on $1,500.00)

THE RICHARD HEALY SCHOLARSHIP
Established in 1908 by Mr. Richard Healy of Worcester, open to competition for residents of Worcester County regardless of creed. (Income on $8,000.00)

THE MR. AND MRS. RICHARD HEALY SCHOLARSHIP
Established in 1916 by Mr. and Mrs. Richard Healy of Worcester, for benefit of a direct relative of donors. (Income on $43,872.84)

THE REV. FREDERICK W. HEANEY, S.J., SCHOLARSHIP
Established in 1920 by Miss. Lillian Heaney, in memory of her deceased brother, the Rev. Frederick W. Heaney, S.J. (Income on $2,500.00)

THE FRANCIS AND JACOB HIATT SCHOLARSHIP
Established for deserving students, with preference to those from Worcester County; selection to be made by the President of the College. (Income on $17,300.00)

THE JOHN W. HODGE SCHOLARSHIP
Established in 1946 by a bequest from the late John W. Hodge to aid some worthy Catholic boy from Cambridge, Mass., the terms and conditions of which are to be fixed and regulated by the college. (Income on $4,466.20)

THE HENRY HOGAN SCHOLARSHIP
Established by gifts of Mr. Henry M. Hogan '18. Income to be awarded to
worthy students selected by the President or Faculty of the College. (Income on $276,050.00)

THE JOHN T. HOLLAND '17, MEMORIAL SCHOLARSHIP
Established on January 2, 1954, by gift from Matthew M. Berman. To be used for worthy students selected by the President of the College. (Income on $8,500.00)

THE HOLY CROSS SCHOLARSHIPS
These are a limited number of tuition or other partial awards that are made from the college funds, at the times and to the amounts that the financial position of the college permits.

KATHERINE H. HOY SCHOLARSHIP
Established on December 14, 1959, by bequest of $5,000.00 from the Estate of James M. Hoy, '05. Income to be used to assist a student with preference given to a needy and deserving boy of St. Stephen's Catholic Parish of Worcester.

C. KEEFE HURLEY SCHOLARSHIP
Established in 1970 by C. Keefe Hurley to support and maintain an endowed athletic scholarship for students determined from time to time by the President of the College and President of the Varsity Club. (Income on $29,000.00)

THE JOHN COLLINS HURLEY SCHOLARSHIP
Established on April 28, 1953, by bequest from the estate of Margaret M. Hurley. Income to be used for education of worthy graduate of Durfee High School, Fall River, Mass. (Income on $5,026.67)

THE WARREN JOSEPH HURLEY SCHOLARSHIP
Established in 1929 by Mrs. Jeremiah J. Hurley in memory of Warren Joseph Hurley, '29, for the benefit of one or more worthy students aspiring to the priesthood. Selection to be made by the President of the College. (Income on $5,000.00)

THE "IN MEMORIAM" SCHOLARSHIP
Established in 1915 by an alumnus of the college for a deserving student. (Income on $8,000.00)

THOMAS R. AND ELIZABETH E. JOHNSON SCHOLARSHIP
Established in 1973, by a bequest from the Estate of Elizabeth E. Johnson for the education of worthy boys from the city of Worcester with preference given to boys within the bounds of Holy Rosary Parish, Worcester. (Income on $15,000.00)
THE REV. JOHN C. KEVENEY SCHOLARSHIP FUND
Established in 1973 by a bequest of Mary S. Weston to be used for scholarships to support and educate students deserving of an education. (Income on $26,850.00)

THE REV. CHARLES L. KIMBALL, S.J. SCHOLARSHIP
Established in June, 1961, by a bequest from the Estate of Rev. Arthur B. Kimball. Income to be used to aid a worthy student selected by the Faculty. (Income on $6,551.40)

THE OTTO SEIDENBURG KING SCHOLARSHIP
Established in October, 1954, by gifts from Atty. John King, '25. Income to be used for a deserving student from a Jesuit high school in the New York City area selected by the President of the College. (Income on $12,325.00)

THOMAS F. AND ELLEN A. KING SCHOLARSHIP
Established in 1969 by a bequest from the estate of Leo A. King, '12. The income to be used toward the tuition of worthy students selected by the College. (Income on $10,000.00)

THE REV. MICHAEL H. KITTREDGE SCHOLARSHIP
Established in 1917 by Rev. Michael H. Kittredge, '75. (Income on $5,000.00)

THE MASSACHUSETTS STATE COUNCIL OF KNIGHTS OF COLUMBUS SCHOLARSHIP FUND
Established in 1937 by the Massachusetts State Council Knights of Columbus; open to members and sons of members of the Knights of Columbus residing and having their membership in the Order in Massachusetts. Award to be made by competitive scholastic examinations under the administration of the College of the Holy Cross.

THE PATRICK W. LALLY MEMORIAL SCHOLARSHIP
Established in March, 1954, from the estate of James Lally to be awarded to a worthy graduate of St. Mary's High School, Milford, Mass., who will be selected by the President of the College of the Holy Cross. (Income on $5,221.60)

THE MICHAEL J. LAWLOR SCHOLARSHIP
Established in February, 1949, by bequest from the late Retta M. Lawlor. Income to be used to aid a bright and needy student, resident in Waterbury, Conn., who in the opinion of college authorities, shall be deserving financial assistance. (Income on $5,000.00)
W.H. LEE MILK COMPANY ENDOWMENT FUND

Established on September 4, 1959, with a gift of 50 shares of Eastman Kodak with the provision that the income from these shares be added to the principal until September 1, 1973. After September 1, 1973, the income to be used for scholarship aid in accordance with specifications as set down in the agreements.

THE JOHN J. LEONARD SCHOLARSHIP OF THE M.C.O.F.

Founded in 1926 and restricted to members, or sons of members, of the M.C.O.F., selection to be made by competitive examinations. (Income on $6,000.00)

KATHERINE W. AND JAMES B. LONGLEY SCHOLARSHIP

Established by New England Mutual Life Insurance Company in recognition of Mr. James B. Longley's service to his clients and industry.

THE REV. JOHN G. MAHONEY, S.J., A FORMER PROFESSOR AT THE COLLEGE, AND JAMES E. MAHONEY, '10 MEMORIAL SCHOLARSHIP

Established in 1946 by Mrs. Edward C. Donnelly in memory of her brothers; to be awarded to a deserving student studying for the degree of Bachelor of Arts in the Classical Course who is to be selected by the President of the College. (Income on $20,000.00)

THE HENRY VINCENT McCabe SCHOLARSHIP

Established in 1916 by the late Mary McCabe of Providence, R.I., for a deserving student. (Income on $5,000.00)

THE REV. DENNIS F. McCAFFREY SCHOLARSHIP

Established on September 29, 1953, by bequest from the estate of Rose A. McCaffrey. (Income on $700.00)

DR. E. JOHN MANGO SCHOLARSHIP FUND

Established in memory of Dr. E. John Mango by Dr. Richard J. LaVigne.

McCAHILL-HARVEY-SLOTTMAN MEMORIAL FUND SCHOLARSHIP

Established by Richard E. Harvey in 1967 with income only to be awarded at the discretion of the President of the College.

THE EUGENE AND MARGARET McCARthy SCHOLARSHIP

Established in July, 1962, by a bequest from the Estate of Margaret McCarthv. Income to be used to aid a worthy student with preference to be given to a resident of Springfield, Mass. (Income on $24,702.63)
THE PETER McCORD SCHOLARSHIP
Established by Mary Lambert McCord for a deserving student.

THE REVEREND JOHN F. McDONNELL SCHOLARSHIP FUND
Established in June, 1967, in memory of Reverend John F. McDonnell, '00. Income to be used for the education of deserving and needy students. Selection to be made by President of the College. (Income on $10,000.00)

THE REV. DAVID F. McGRATH SCHOLARSHIP I.
Established in 1907 by the Rev. David F. McGrath, '70, beneficiary to be selected by competitive examinations. Restricted to graduates of St. Mary’s Parish School, Milford, Mass., if there be more than one eligible candidate. If but one such, graduates of Milford Public High School may be admitted to competition; if but one candidate from both schools, any one otherwise eligible in the State to be admitted to competition. (Income on $6,000.00)

THE REV. DAVID F. McGRATH SCHOLARSHIP II.
Established in 1920 by the Rev. David F. McGrath, '70; conditions same as the “Rev. David F. McGrath Scholarship I.” (Income on $6,000.00)

THE REV. DAVID F. McGRATH SCHOLARSHIP III
Established in 1920 by the Rev. David F. McGrath, '70; conditions same as the “Rev. David F. McGrath Scholarship I.” (Income on $8,000.00)

THE FRANK J. McHUGH AND KATHLEEN B. McHUGH SCHOLARSHIP FUND
Established on June 14, 1968, by bequest from the estate of Frank J. McHugh, Jr. '38. (Income on $79,918.00)

THE DR. FREDERICK J. McKECHNIE SCHOLARSHIP
Established in December, 1962, by a bequest from the Estate of Mary I. Dunn. (Income on $6,223.76)

THE MONSIGNOR JOHN W. McMAHON SCHOLARSHIP
Established in 1938 under provisions of the will of Rt. Rev. Msgr. John W. McMahon, ’67, to give scholarship aid to a Holy Cross student to be designated by the Reverend Pastor of St. Mary’s parish, Charlestown, Boston, Massachusetts, preference being given to students coming from St. Mary’s parish (Income on $5,000.00)

THE KATHERINE McQUADE SCHOLARSHIP
Established in June, 1967, by a bequest from the Estate of Katherine McQuade. (Income on $17,668.45)
THE FRANCIS L. MILLER SCHOLARSHIP
Founded and augmented by gifts in honor of the late Francis L. Miller, Bursar of the College from 1931 to 1961. Income to be awarded to worthy and needy students with preference given to fatherless boys. (Income on $27,516.00)

THE PATRICK J. MURPHY SCHOLARSHIP
Established in 1944 by Mrs. Ellen M. Murphy, as a memorial to her husband, the late Patrick J. Murphy, Worcester, Mass. (Income on $1,500.00)

THE MONSIGNOR RICHARD NEAGLE SCHOLARSHIP
Established in 1943 by His Excellency the Honorable Alvan T. Fuller, former Governor of the Commonwealth of Massachusetts, in memory of the late Right Reverend Monsignor Richard Neagle of the Class of 1873, to assist boys qualified, in the opinion of the Faculty, but who otherwise could not afford such an expenditure as would be necessary to enjoy the educational and religious advantages of the College of the Holy Cross. (Income on $35,000.00)

THE DENIS F. AND LORETTO RADEL O'CONNOR SCHOLARSHIP
Established on May 26, 1955, by Dr. Denis F. O'Connor, ’93, to be used for a worthy student to be selected by college authorities. (Income on $30,000.00)

REV. LEO J. O'CONNOR, S.J., SCHOLARSHIP
Established by friends of Father O'Connor to provide scholarships for students selected by the Trustees of the College of the Holy Cross. (Income on $30,145.00)

THE O'DRISCOLL SCHOLARSHIP
Established in 1874, for a student (limited to residents of the City of Worcester), who is a candidate for the priesthood and is selected by the Bishop of Worcester or his delegate. (Income on $3,000.00)

THE MAY AND SYLVAN OESTREICHER SCHOLARSHIP
Established on December 30, 1957, by gift of Sylvan Oestreicher. (Income on $37,926.80)

THE MARY C. O'NEIL FUND FOR BRISTOL COUNTY STUDENTS
Established on January 7, 1955, by gifts from Margaret T. O'Neil, to be used to aid a student from Bristol County. (Income on $19,973.98)
THE REV. DANIEL H. O’NEILL SCHOLARSHIP I.
Established in 1895, limited to residents of St. Peter’s Parish, Worcester, Mass. (Income on $1,000.00)

THE REV. DANIEL H. O’NEILL SCHOLARSHIP II.
Established in 1908, limited to the residents of the City of Worcester. (Income on $1,500.00)

PENHALL-O’ROURKE SCHOLARSHIP
Established on September 9, 1958, by bequest of $1,000.00 from the estate of Dr. James J. O’Rourke, ’09, to be used for scholarship purposes in aiding a deserving student.

REVEREND LAWRENCE F. O’TOOLE SCHOLARSHIP
Established in May 1966, in memory of Reverend Lawrence F. O’Toole, ’13, by his sister, Mrs. Florence Drury. Preference to priesthood aspirants with preference, first, to a member of St. Bernard’s Parish, Worcester and, second, to anyone in the Diocese of Worcester. (Income on $10,000.00)

THE REV. DR. PATRICK B. PHELAN SCHOLARSHIP
Established in 1917 by Rev. Dr. Patrick B. Phelan, ’69; open to competition for graduates of the Sacred Heart School, Holyoke, Mass. (Income on $16,000.00)

REVEREND MICHAEL G. PEIRCE, S.J., SCHOLARSHIP FUND
Established by gifts from Robert H. McCooey, ’52. (Income on $3,000.00)

THE DAVID H. POSNER AND MARY MURPHY POSNER FOUNDATION
Established on July 1, 1957, by bequest from the estate of Mary M. Posner. Income to be used toward tuition of worthy students. (Income on $14,922.68)

THE MR. AND MRS. ALOYSIUS F. POWER SCHOLARSHIP
Established by a gift from Mr. Aloysius F. Power, ’23. Income to be awarded to whom the College authorities judge to be in need of financial assistance and worthy of aid. (Income on $104,375.00)

THE REV. JOHN J. POWER SCHOLARSHIP
Established in 1907 by the late Rev. John J. Power, D.D., limited to residents of St. Paul’s Parish, Worcester, Mass. (Income on $1,500.00)

THE MARY A. PRENDERGAST SCHOLARSHIP
Established in 1945 under the will of the late Mary A. Prendergast for deser-
ving orphan students. (Income on $4,948.40)

STEPHEN JOHN PRIOR SCHOLARSHIP FUND
Established in 1971 by the family in memory of their son Stephen. Scholarships are to be awarded at the discretion of the College from income only.

THE PURPLE PATCHER SCHOLARSHIP

THE “QUID RETRIBAUM” SCHOLARSHIP
Established in 1907 by a friend of education in gratitude for divine favors; if not filled by founder, competitive examinations will be held. (Income on $8,000.00)

THE LILLIAN A. QUINN SCHOLARSHIP FUND
Established in 1968 by a bequest from the late Lillian A. Quinn. Income to be used to provide scholarship aid for worthy and needy students to be selected by the President of the College, preference being given to students from Immaculate Conception Parish, Worcester. (Income on $33,117.00)

THE PATRICK W. RAFFERTY SCHOLARSHIP
Established in 1920 and open to competition among deserving students of the City of Worcester. (Income on $2,000.00)

IN MEMORY OF DENNIS M. AND JOSEPHINE R. REARDON SCHOLARSHIP
Established on January 11, 1952, by bequest from the estate of Josephine F. Reardon. Income to be used to aid a worthy student preparing for the holy priesthood. (Income on $10,575.39)

THE JOHN REID SCHOLARSHIP
Established in 1894, limited to residents of Worcester. (Income on $1,-500.00)

THE CATHERINE F. REILLY SCHOLARSHIP
Established on June 1, 1955, by bequest from the estate of Joseph J. Reilly, '04, in memory of his mother. Income to be used for a worthy student to be selected by college authorities. (Income on $12,500.00)

THE JAMES H. REILLY SCHOLARSHIP
Established on June 1, 1955 from the estate of Joseph J. Reilly, '04, in memory of his father. Income to be used for a worthy student to be selected
by college authorities. (Income on $12,500.00)

THE REILLY MEMORIAL SCHOLARSHIP
Established in 1922 by the late Joseph J. Reilly, '04. (Income on $1,000.00)

THE MARY J. ROBINSON SCHOLARSHIP
Established in 1943 by the late Mary J. Robinson in memory of her mother and father and brothers to assist deserving young men of the Roman Catholic faith in obtaining a collegiate education at the College of the Holy Cross. (Income on $11,297.86)

THE REV. WILLIAM H. ROGERS SCHOLARSHIP
Established in 1918 by Rev. William H. Rogers, '68. (Income on $10,000.00)

PATRICK AND MARY McCrueley Ronayne Scholarship
Established in 1973 by a bequest from the Estate of Elizabeth E. Johnson for the education of worthy boys from the city of Worcester; such boys to be selected by the Trustees of the College. (Income on $15,000.00)

THE DOROTHY H. AND LEWIS ROSENSTIEL SCHOLARSHIPS
Established on November 26, 1968, through a grant from The Dorothy H. and Lewis Rosenstiel Foundation, in memory of Dorothy H. Rosenstiel, to be awarded with preference to members of disadvantaged minorities, primarily Jewish, Black and Puerto Rican. (Income on $50,000.00)

THE HON. JOHN E. RUSSELL SCHOLARSHIP
Established in 1907 by a Friend of the College. (Income on $1,500.00)

THE MR. AND MRS. JOHN A. RYAN FAMILY SCHOLARSHIP FUND
Established in 1967, by Miss Mable C. Ryan. (Income on $5,300.00)

THE SCHOLLER FOUNDATION SCHOLARSHIP
Established on October 24, 1955. (Income on $1,000.00)

THE JOHN F. SCOTT FUND
Established by gifts from John F. Scott, '08. Income to be used to aid worthy students from the State of Maine. (Income on $2,500.00)

TIMOTHY A. SHEA SCHOLARSHIP FUND
Established by bequests totaling $101,918.16 from the estate of Timothy A. Shea in memory of his parents, Mr. and Mrs. Daniel M. Shea; a brother, Michael F. Shea; and sisters, Katherine and Elizabeth. Income to be used exclusively for non-resident students residing in the City of Worcester and awarded on a competitive basis.
LT. TIMOTHY J. SHORTEN SCHOLARSHIP FUND
Established by his wife Darlene in memory of 1st Lieutenant Timothy J.
Shorten, U.S.M.C.R., '64. Income to be awarded to worthy and needy
students designated by the College. (Income on $2,800.00)

THE ELIZABETH SPANG SCHOLARSHIP
Established in 1936 by the will of Elizabeth Spang of West Haven, Connec-
ticut. This income to be used toward the education of a "student of Holy
Cross College whom the governing body of said College may deem to be in
need of financial assistance for his college work and worthy of said
scholarship." (Income on $5,000.00)

REV. RAYMOND J. SWORDS, S.J., SCHOLARSHIP
Established by the Class of 1970 with income only awarded at the discretion
of the College.

ERNEST P. TASSINARI SCHOLARSHIP
Established by a gift from Ernest P. Tassinari, '48. Income to be awarded to
worthy and needy students designated by the College. (Income on $50,-138.85)

IN MEMORY OF HELEN M. AND JOHN F. TINSLEY
SCHOLARSHIP
Established on November 20, 1953 by bequest from the estate of John F.
Tinsley. Income to be used to assist worthy students selected by the Presi-
dent of the College. (Income on $71,829.20)

THE R.J. TOOMEY CO. SCHOLARSHIP
Established by gifts from John A. Toomey, '28, Lawrence T. Toomey, '30
and Richard J. Toomey, '23. (Income on $4,600.00)

THE REV. DAVID W. TWOMEY, S.J. SCHOLARSHIP
Established on October 10, 1955 by gifts from family and friends of Fr.
Twomey, S.J. Income to be used to aid a worthy student. (Income on $21,-100.00)

THE HONORABLE DAVID I. WALSH SCHOLARSHIP FUND
Established by a gift of Mr. George J. Feldman with scholarships to be
awarded to students whom the donor and College authorities judge to be in
financial assistance.

THE REV. ROBERT WALSH SCHOLARSHIP
Established in 1895, limited to residents of the Immaculate Conception
Parish, Worcester, Mass. (Income on $1,000.00)
THE STEPHEN W. WILBY SCHOLARSHIP

Founded by the Naugatuck Valley Alumni Association and friends in Connecticut. (Income on $7,514.01)

THE JOHN A. WILLO SCHOLARSHIP

Established by a gift from Mrs. John A. Willo in memory of her late husband. Income to be awarded to worthy and needy students selected by the President of the College. (Income on $20,000.00)

OWEN J. WOOD SCHOLARSHIP FUND

Established in May 1967 in memory of Owen J. Wood, ’66, by The Worcester Undergraduate Club. The income is to be used to provide financial aid to a Worcester area student, with preference given to orphans. (Income on $4,300.00)

WORCESTER FEDERAL SAVINGS AND LOAN ASSOCIATION EDUCATIONAL FUND

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Raymond W. Copson,' Chairman, Edward F. Callahan,' Rev. John D.B. Hamilton,' Myron A. Schwager,' Patricia T. Hopkins,4 '76, Craig T. Ingram,4 '74, Timothy J. Perry,4 '74.

STUDENT PERSONNEL POLICIES

CODE KEY FOR COMMITTEES:
'Term expires June 1974.
'Term expires June 1975.
'Term expires June 1976.
'Term expires Mar. 1975.
'Student Members
'Ex Officio

Athletic Staff
Ronald S. Perry, B.S., B.A.
Joseph W. McDonough, B.S.
Rev. Francis J. Hart, S.J., M.A.
Richard R. Lewis

Director of Athletics
Business Manager of Athletics
Chaplain
Director of Intramurals
Director of Sports Information
Edward A. Doherty, B.S.  
John Hickman, B.S.  
Gayton Salvucci, B.A.  
Patrick Ryan  
Peter Doherty  
John P. Whalen, M.A.  

Paul Morano  
George Blaney, B.S.  
Frank McArdle, B.A.  
Togo A. Palazzi, B.S.  
W. Harold O’Connor, Ph.B.  

James Kavanagh, B.A.  
Gerald R. Anderson, A.B.  
Walter H. Kane  
Robert Skinner, B.S.  
Harry Tiffany  
David Pearson  
Nicholas Sharry, A.B.  
Paul Parenteau  
John M. Foley, Jr., B.S.  
David Barnicle  
Richard Rodger  
Ronald Waddell  
John P. Scott  
John Moriarty  
Joseph deMarco, M.D.  

Coach of Football  
Assistant Coach of Football  
Assistant Coach of Football  
Assistant Coach of Football  
Assistant Coach of Football  
Coach of Baseball  
Assistant Coach of Football  
Assistant Coach of Baseball  
Coach of Basketball  
Assistant Coach of Basketball  
Assistant Coach of Basketball  
Coach of Track  
Coach of Cross Country  
Assistant Coach of Track  
Coach of Golf  
Coach of Hockey  
Assistant Coach of Hockey  
Coach of Lacrosse  
Assistant Coach of Lacrosse  
Coach of Tennis  
Coach of Swimming  
Coach of Crew  
Coach of Soccer  
Coach of Wrestling  
Coach of Fencing  
Trainer  
Assistant Trainer  
Physician
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BEQUESTS

Gifts by will to Holy Cross are essential to the future of the College. The unrestricted gift is the most useful and effective since it can be allocated where the need is greatest. However, a gift for a specific purpose is also vital and may take the form of endowed chairs, named scholarships, buildings, books for the library, research equipment, works of art and the like. The following suggested forms for a bequest to the College of the Holy Cross should be adapted or rewritten by legal counsel to fit the donor’s individual situation.

LEGAL FORMS OF BEQUEST

Unrestricted General Legacy. I bequeath to the trustees of the College of the Holy Cross, a corporation existing under the laws of the Commonwealth of Massachusetts and located in Worcester, Massachusetts, the sum of (insert dollar amount) for its general purposes.

Gift for Specific Purpose. I bequeath to the trustees of the College of the Holy Cross, a corporation existing under the laws of the Commonwealth of Massachusetts and located in Worcester, Massachusetts, the sum of (insert dollar amount) to be added to its endowment with the net income therefrom to be used for (insert specific purpose). If in the opinion of the College’s Board of Trustees, the purposes of the College would be better served by using the income or principal, or both, for the College’s general purposes, the income or principal, or both, may so be used.

Specific Legacy. I bequeath my (insert description of property) to the trustees of the College of the Holy Cross, a corporation existing under the laws of the Commonwealth of Massachusetts and located in Worcester, Massachusetts.

Gift of Residuary Estate. I devise and bequeath the residue of the property owned by me at my death, real and personal and wherever situate, to the trustees of the College of the Holy Cross, a corporation existing under the laws of the Commonwealth of Massachusetts and located in Worcester, Massachusetts, for its general purposes (or name a particular purpose).

Consult your own attorney. The provisions in your Will for making a gift to the College of the Holy Cross will depend upon the type of gift and your unique circumstances. We hope these specimen provisions will be helpful to your attorney.